1902

Catalogue of the University of Maine 1901-1902

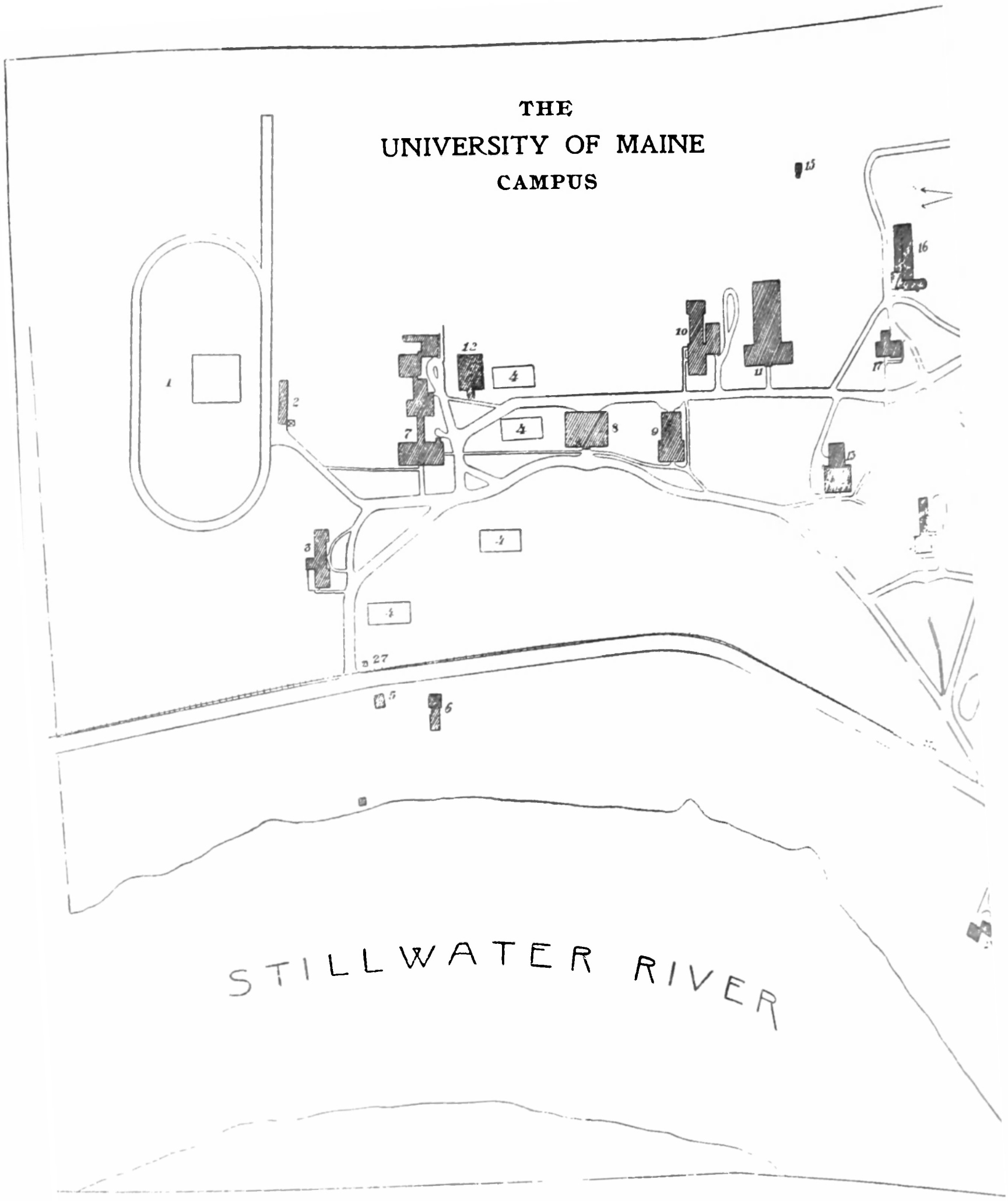
University of Maine - Main

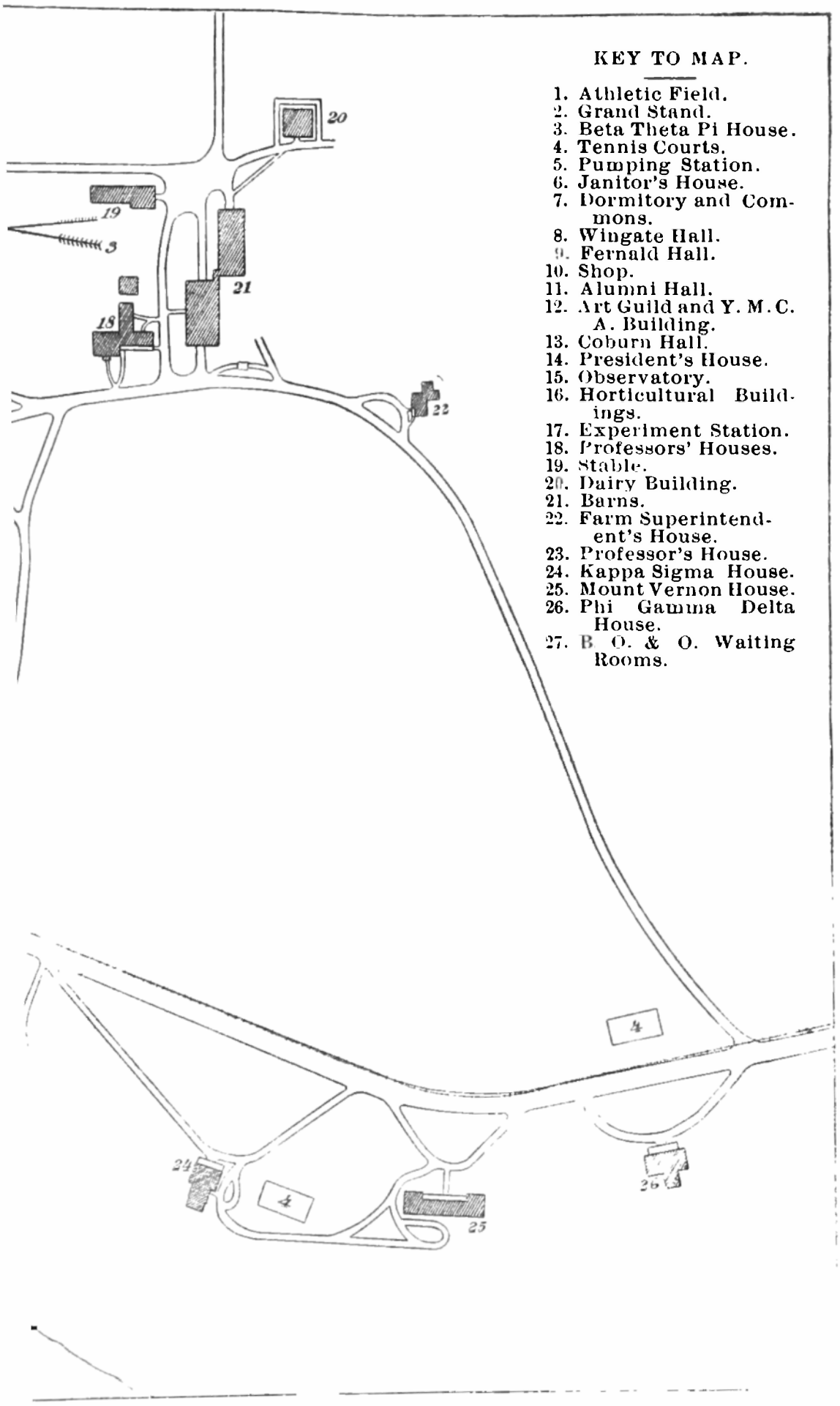
Catalogue of the University of Maine

1901-02

A VIEW OF THE CAMPUS

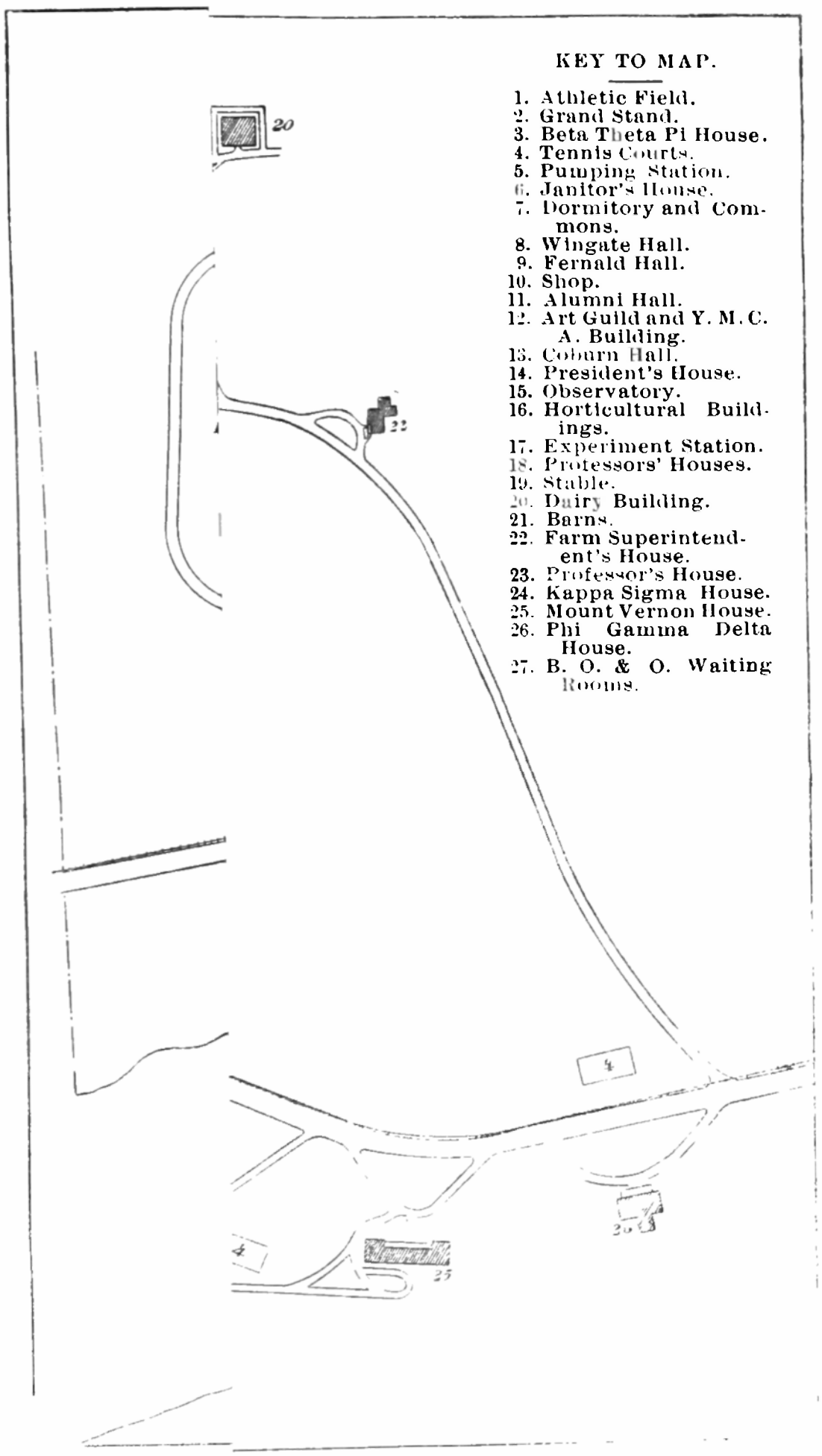
THE
UNIVERSITY OF MAINE
CAMPUS





KEY TO MAP.

1. Athletic Field.
2. Grand Stand.
3. Beta Theta Pi House.
4. Tennis Courts.
5. Pumping Station.
6. Janitor's House.
7. Dormitory and Commons.
8. Wingate Hall.
9. Fernald Hall.
10. Shop.
11. Alumni Hall.
12. Art Guild and Y. M. C. A. Building.
13. Coburn Hall.
14. President's House.
15. Observatory.
16. Horticultural Buildings.
17. Experiment Station.
18. Professors' Houses.
19. Stable.
20. Dairy Building.
21. Barns.
22. Farm Superintendent's House.
23. Professor's House.
24. Kappa Sigma House.
25. Mount Vernon House.
26. Phi Gamma Delta House.
27. B. O. & O. Waiting Rooms.



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CATALOGUE

OF THE

University of Maine

1901-1902

ORONO, MAINE

AUGUSTA, MAINE
KENNEBEC JOURNAL PRINT
1902

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CALENDAR

FALL TERM, 1901

September 16, Monday,	Arrearage examinations begin.
September 17, Tuesday,	Entrance examinations begin.
September 19, Thursday,	Fall term begins.
November 26, Tuesday,	Meeting of the Board of Trustees.
November 26, Tuesday,	Thanksgiving recess begins, 4.30 P. M.
December 3, Tuesday,	Thanksgiving recess ends, 7.45 A.M.
December 6, Friday,	Sophomore prize declamations.
December 19, Thursday,	Christmas recess begins, 4.30 P. M.
December 31, Tuesday,	Arrearage examinations begin (Spring term studies).

1902

January 2, Thursday,	Christmas recess ends, 7.45 A. M.
January 31, Friday,	Fall term ends.

SPRING TERM, 1902

February 3, Monday,	Spring term begins.
February 22, Saturday,	Washington's birthday.
March 26, Wednesday,	Easter recess begins, 4.30 P. M.
March 31, Monday,	Arrearage examinations begin (Fall term studies).
April 2. Wednesday,	Easter recess ends, 7.45 A. M.
May 24, Saturday,	Senior vacation begins.
May 30, Friday,	Memorial day.

June	7, Saturday,	Junior exhibition.
June	8, Sunday,	Baccalaureate sermon.
June	9, Monday,	Convocation.
June	9, Monday,	Class day.
June	10, Tuesday,	Meeting of the Board of Trustees.
June	10, Tuesday,	Exhibition drill.
June	10, Tuesday,	Receptions by the fraternities.
June	10, Tuesday,	Reception by the President.
June	11, Wednesday,	COMMENCEMENT.
June	11, Wednesday,	Commencement dinner.
June	11, Wednesday,	Meeting of the Alumni Association.
June	11, Wednesday,	Commencement concert.
June	12, Thursday,	Entrance examinations begin.

FALL TERM, 1902

September	15, Monday,	Arrearage examinations begin.
September	16, Tuesday,	Entrance examinations begin.
September	18, Thursday,	Fall term begins.
November	25, Tuesday,	Meeting of the Board of Trustees.
November	25, Tuesday,	Thanksgiving recess begins, 4.30 P. M.
December	2, Tuesday,	Thanksgiving recess ends, 7.45 A. M.
December	5, Friday,	Sophomore prize declamations.
December	18, Thursday,	Christmas recess begins, 4.30 P. M.
December	30, Tuesday,	Arrearage examinations begin (Spring term studies).

1903

January	1, Thursday,	Christmas recess ends, 7.45 A. M.
January	30, Friday,	Fall term ends.

SPRING TERM, 1903

February	2, Monday,	Spring term begins.
June	10, Wednesday,	COMMENCEMENT.

CALENDAR OF THE SCHOOL OF LAW

1901

October 2, Wednesday, Fall term begins.
December 18, Wednesday, Fall term ends.

1902

January 8, Wednesday, Winter term begins.
March 19, Wednesday, Winter term ends.

March 26, Wednesday, Spring term begins.
June 11, Wednesday, COMMENCEMENT.
October 1, Wednesday, Fall term begins.
December 17, Wednesday, Fall term ends.

1903

January 7, Wednesday, Winter term begins.
March 18, Wednesday, Winter term ends.

March 25, Wednesday, Spring term begins.
June 10, Wednesday, COMMENCEMENT.

THE BOARD OF TRUSTEES

Hon. Henry Lord, *President,*	Bangor.
Hon. Elliott Wood,	Winthrop.
Hon. Charles Plummer Allen, B. S.,	Presque Isle.
Hon. John Alfred Roberts, M. A.,	Norway.
Hon. Edward Brackett Winslow,	Portland.
Hon. Voranus Lathrop Coffin,	Harrington.
Hon. Albert Joseph Durgin,	Orono.
Edwin James Haskell, B. S.,	Westbrook.

EXECUTIVE COMMITTEE

Trustees Lord and Allen.

TREASURER

Hon. Isaiah Kidder Stetson, B. Ph.,	Bangor.

ADVISORY BOARD FOR THE SCHOOL OF LAW

Hon. Charles Hamlin, M. A., *President,*	Bangor.
Hon. Henry Bradstreet Cleaves,	Portland.
Hon. William Henry Fogler,	Rockland.
Hon. William Thomas Haines, LL. D.,	Waterville.
Hon. Herbert Milton Heath, M. A.,	Augusta.
Hon. Andrew Peters Wiswell, B. A.,	Ellsworth.
Dean George Enos Gardner, M. A., *Secretary,*	Bangor.

THE EXPERIMENT STATION COUNCIL

George Emory Fellows, Ph. D.,.....Orono.
Charles Dayton Woods, B. S., *Secretary*,.....Orono.
Edward Brackett Winslow,.....Portland.
Voranus Lathrop Coffin,.....Harrington.
John Alfred Roberts, M. A.,.....Norway.
Augustus William Gilman,.....Foxcroft.
Eugene Harvey Libby,.....Auburn.
Charles S. Pope,.....Manchester.
James Monroe Bartlett, M. S.,.....Orono.
Lucius Herbert Merrill, B. S.,.....Orono.
Fremont Lincoln Russell, V. S.,.....Orono.
Welton Marks Munson, M. S.,.....Orono.
Gilbert Mottier Gowell, M. S.,.....Orono.
Gilman Arthur Drew, Ph. D.,.....Orono.

ALUMNI ASSOCIATIONS

THE GENERAL ASSOCIATION

President, Louis C. Southard, 73 Tremont St., Boston.
Recording Secretary, Ora W. Knight, 84 Forest Ave., Bangor.
Corresponding Secretary, Ralph K. Jones, Orono.
Treasurer, Albert H. Brown, Oldtown.
Necrologist, James N. Hart, Orono.

THE WEST MAINE ASSOCIATION

President, R. W. Eaton, Brunswick.
Secretary and Treasurer, A. C. Westcott, 7 Exchange St., Portland.

THE NORTH MAINE ASSOCIATION

President, Harvey B. Thayer, Presque Isle.
Secretary, N. H. Martin, Fort Fairfield.

THE BOSTON ASSOCIATION

President, H. F. Hamilton, 125 Marlborough St.
Secretary, J. W. Owen, 101 Milk St.

THE NEW YORK ASSOCIATION

President, J. S. Ferguson, 330 West 28th St.
Secretary, C. H. Nealley, 111 West 68th St.

THE WASHINGTON (D. C.) ASSOCIATION

President, F. Lamson-Scribner, Dep't of Agriculture.
Secretary, George P. Merrill, National Museum.

THE PENOBSCOT VALLEY ASSOCIATION

President, E. H. Kelley, Bangor.
Secretary, C. A. Dillingham, Bangor.

THE WESTERN ASSOCIATION

President, Oliver C. Farrington, Field Columbian Museum, Chicago, Ill.
Secretary, Ray H. Manson, Kellogg Switchboard and Supply Co., Chicago, Ill.

THE FACULTY AND OTHER OFFICERS

GEORGE EMORY FELLOWS, PH. D.,.....Campus.
President.

MERRITT CALDWELL FERNALD, PH. D.,.....Bennoch Street.
Professor of Philosophy.

ALFRED BELLAMY AUBERT, M. S.,.....Main Street.
Professor of Chemistry.

ALLEN ELLINGTON ROGERS, M. A.,.....College Street.
Professor of Political Economy and History,
and Professor of Constitutional Law.

WALTER FLINT, M. E.,.....College Street.
Professor of Mechanical Engineering.

JAMES MONROE BARTLETT, M. S.,.....College Street.
Chemist in the Experiment Station.

LUCIUS HERBERT MERRILL, B. S.,.....Bennoch Street.
Professor of Biological Chemistry and
Chemist in the Experiment Station.

JAMES NORRIS HART, C. E., M. S.,.....Campus.
Professor of Mathematics and Astronomy.

FREMONT LINCOLN RUSSELL, B. S., V. S.,.....Main Street.
Professor of Biology, and Veterinarian of the
Experiment Station.

WELTON MARKS MUNSON, Ph. D.,.....Main Street.
Professor of Horticulture, and Horticulturist of
the Experiment Station.

HORACE MELVYN ESTABROOKE, M. S., M. A.,.....Main Street.
Professor of English.

JAMES STACY STEVENS, M. S.,.....Main Street.
Professor of Physics.

GILBERT MOTTIER GOWELL, M. S.,.....Campus.
Professor of Animal Industry, and Agriculturist of the Experiment Station.

CHARLES DAYTON WOODS, B. S.,.....Main Street.
Professor of Agriculture, and Director of the Experiment Station.

NATHAN CLIFFORD GROVER, B. S., C. E.,.....Main Street.
Professor of Civil Engineering.

GEORGE ENOS GARDNER, M. A.,.....Bangor.
Professor of Law, and Dean of the School of Law.

HOWARD SCOTT WEBB, M. E., E. E.,.....North Main Street.
Professor of Electrical Engineering.

KARL POMEROY HARRINGTON, M. A.,.....Campus.
Professor of Latin.

JOHN HOMER HUDDILSTON, Ph. D.,.....Main Street.
Professor of Greek.

WILLIAM EMANUEL WALZ, M. A., LL. B.,.....Bangor.
Professor of Law.

GILMAN ARTHUR DREW, Ph. D.,.....Middle Street.
Professor of Biology, and Zoologist of the Experiment Station.

WILBUR FISK JACKMAN, B. S., Ph. C.,.....Pine Street.
Professor of Pharmacy.

RALPH KNEELAND JONES, B. S.,.....Bennoch Street.
Librarian.

ORLANDO FAULKLAND LEWIS, Ph. D.,.....Mill Street.
Professor of Modern Languages.

BENJ. PIATT RUNKLE, L. H. D., Brevet Major General, Bangor.
Professor of Military Science.

FRED HALE VOSE, B. M. E.,.....Mrs. Graves.
Instructor in Mechanical Engineering.

FOREST JOHN MARTIN, LL. B.,.....Bangor.
Instructor in Law.

HUGO CLARK, C. E.,.....Bangor.
Instructor in Law.

WILLIAM ROBINSON PATTANGALL, M. S.,.....Bangor.
Instructor in Law.

EDGAR MYRICK SIMPSON, B. A.,.....Bangor.
Instructor in Law.

GILBERT HILLHOUSE BOGGS, Ph. D.,.....Main Street.
Instructor in Chemistry.

GUY ANDREW THOMPSON, M. A.,.....Mrs. Graves.
Instructor in English and Modern Languages.

PHILIP WARNER HARRY, B. A.,.....Mill Street.
Instructor in Modern Languages.

HAROLD SHERBURNE BOARDMAN, C. E.,.....Bangor.
Instructor in Civil Engineering.

CHARLES HAMLIN, M. A.,.....Bangor.
Lecturer on Insolvency.

LUCILIUS ALONZO EMERY, LL. D.,.....Ellsworth.
Lecturer on Roman Law.

ANDREW PETERS WISWELL, B. A.,.....Ellsworth.
Lecturer on Evidence.

LOUIS CARVER SOUTHARD, M. S.,.....Boston.
Lecturer on Medical Jurisprudence.

STANLEY JOHN STEWARD, B. M. E.,.....Mill Street.
Foreman of the Shop.

LUCIUS JERRY SHEPARD, B. S.,.....Campus.
Assistant Agriculturist in the Experiment Station.

ORA WILLIS KNIGHT, M. S.,.....Bangor.
Assistant Chemist in the Experiment Station.

LOUIS SIFF, B. S.,.....Main Street.
Tutor in Mathematics.

ROSCOE MILLIKEN PACKARD, M. A.,.....Mrs. Graves.
Tutor in Mathematics.

CLINTON LLEWELLYN COLE, B. C. E.,.....Mrs. Graves.
Tutor in Drawing.

FRANK HENRY MITCHELL, M. S.,.....Main Street.
Tutor in Chemistry.

JOHN EMERSON BURBANK, M. A.,.....Forest Street.
Tutor in Physics.

GEORGE HAROLD DAVIS, B. S.,.....Campus.
Tutor in Electrical Engineering.

ARCHER LEWIS GROVER, B. M. E.,.....Mrs. Graves.
Physical Director.

EDWARD RAYMOND MANSFIELD, B. S.,.....Bennoch Street.
Assistant Chemist in the Experiment Station.

CLIFFORD DYER HOLLEY, B. S.,.....Pine Street.
Assistant Chemist in the Experiment Station.

GEORGE EDWARD POUCHER, B. S.,.....Campus.
Assistant in Physics.

LEWIS ROBINSON CARY, B. S.,.....Pine Street.
Assistant in Biology.

HORACE WILLIAM BRITCHER, B. C. E.,.....Middle Street.
Assistant Zoologist in the Experiment Station.

MARSHALL BAXTER CUMMINGS, B. S.,.....Campus.
Assistant in Horticulture and Botany.

GENEVA RING HAMILTON,.....Myrtle Street.
Assistant Librarian.

ELIZABETH ABBOTT BALENTINE,.....Campus.
Secretary to the President and Secretary of the Faculty.

STANDING COMMITTEES OF THE FACULTY

Admission to Examinations

Professor Fernald, Professor Webb, Professor Drew, Mr. Vose.

Approved Schools

Professor Estabrooke, Professor Fernald, Professor Harrington (Secretary), Professor Hart, Professor Huddilston, Professor Stevens.

Athletics

Professor Jones, Professor Lewis, Mr. Grover.

Catalogue

Professor Harrington, Professor Grover, Professor Merrill.

Course of Study

Professor Grover, Professor Hart, Professor Drew, Mr. Harry.

Executive Committee

Professor Hart, Professor Stevens, Professor Webb.

Graduate Degrees

Professor Fernald, Professor Estabrooke, Professor Harrington, Professor Webb.

Honors

Professor Stevens, Professor Huddilston, Professor Munson, Professor Drew.

Library

Professor Jones, Professor Estabrooke, Professor Flint, Professor Jackman.

Rules

Professor Woods, Professor Stevens, Professor Munson.

Student Advisers

For Freshmen in all courses: Professor Lewis, Mr. Cole.
For all other students in the Classical, Latin-Scientific, and Scientific Courses, Professor Harrington.
For all other students in the Chemical, Agricultural, Pharmacy, and Preparatory Medical Courses, Professor Jackman.
For all other students in the Civil Engineering Course, Professor Grover.
For all other students in the Mechanical Engineering Course, Professor Flint.
For all other students in the Electrical Engineering Course, Professor Webb.

THE UNIVERSITY OF MAINE

ESTABLISHMENT

By an act of Congress, approved July 2, 1862, it was provided that there should be granted to the States, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which there should be established a perpetual fund, "the interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where *the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*" The act forbade the use of any portion of the principal or interest of this fund for the purchase, erection, or maintenance of buildings; and required each state taking the benefit of the provisions of the Act "to provide within five years not less than one college" to carry out the purposes of the Act.

Maine accepted this grant in 1863, and in 1865 constituted "a body politic and corporate, by the name of the Trustees of the State College of Agriculture and the Mechanic Arts." The Trustees were authorized to receive and hold donations, to select the professors and other officers of the college, to establish the conditions for admission, to lay out courses of study, to grant degrees, and to exercise other usual powers and privileges.

The Governor and Council were given the right "to examine into the affairs of the college, and the doings of the trustees, and to inspect all their records and accounts, and the buildings and premises occupied by the college."

It was provided that in addition to the studies especially required by the Act of Congress, the college should teach such other studies as its facilities would permit.

The Legislature of 1897 changed the name of the institution to "The University of Maine."

ENDOWMENT AND INCOME

The State of Maine received, under the Act of Congress above referred to, two hundred and ten thousand acres of public land, from which the University has realized an endowment fund of $118,300. This has been increased by a bequest of $100,000 from Abner Coburn of Skowhegan, who was for many years president of the Board of Trustees. The town of Orono contributed $8,000, and the town of Oldtown $3,000, for the purchase of the site on which the buildings stand. The State has appropriated about $300,000 for the material equipment.

Under an Act of Congress approved March 2, 1887, the University receives $15,000 annually for the maintenance of the department known as the Agricultural Experiment Station.

Under an Act of Congress approved August 30, 1890, the University receives $25,000 annually for its more complete endowment and maintenance.

Under an Act of the Legislature, approved March 20, 1897, the University receives $20,000 annually from the State for current expenses. Student fees and miscellaneous receipts complete the income.

LOCATION

The University has a beautiful and healthful location in the town of Orono, Penobscot county, half way between the villages of Orono and Stillwater, three miles from the city of Oldtown, and nine miles from the city of Bangor. The Stillwater river, a branch of the Penobscot, flows in front of the buildings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the State.

The Bangor, Orono and Oldtown Electric Railroad runs through the university grounds. Visitors will find it convenient to take the electric cars at Bangor, Veazie, or Oldtown, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by the Maine Central Railroad.

The School of Law is located in the Exchange Building, Bangor, at the corner of Exchange and State streets.

THE BUILDINGS AND THEIR EQUIPMENT

WINGATE HALL.—One of the most conspicuous buildings on the campus, Wingate Hall, named in honor of William P. Wingate of Bangor, long an honored member of the board of trustees, is a three-story brick structure, rectangular in form, with a handsome clock tower. It was erected for the departments of civil and mechanical engineering, but is at present occupied in part by other departments. On the ground floor are two large designing rooms, recitation rooms, instrument rooms, and private offices for the professors in the engineering departments. On the

second floor are the offices and recitation rooms of the professors of physics, Greek, and Latin, the physical laboratories, and the apparatus room. On the third floor are large, well lighted drawing rooms. In the basement are the dynamo laboratory and the testing room of the department of civil engineering. The testing room contains a Riehle testing machine of 60,000 pounds capacity, cement testing machine, etc. The dynamo laboratory is provided with six direct-current dynamos, two alternating-current dynamos, a rotary converter, transformer, ammeters, voltmeters, wattmeters, rheostats, switches, etc., affording accommodations for fifteen students in a section.

Oak Hall.—North of Wingate Hall is Oak Hall, a substantial four-story brick building used as a dormitory for men, named in honor of Lyndon Oak of Garland, for many years a useful member of the board of trustees. It contains forty-nine study rooms for students, and is supplied with bath rooms. It is heated by steam, supplied with water, and lighted by electricity. It was remodeled in 1895.

Fernald Hall.—This building, named in honor of Merritt C. Fernald, Ph. D., president of the University from 1879 to 1893, is a two-story brick building, situated south of Wingate Hall. It contains fifteen rooms devoted to the departments of chemistry and pharmacy. On the first floor are the quantitative and pharmaceutical laboratories, with offices and private laboratories for the professors of chemistry and pharmacy; upon the second floor are the lecture rooms, the qualitative laboratory, the office and private laboratory of the instructor in qualitative analysis, a store room, and a recitation room. Under the roof are arranged the photographic studio, laboratory, and dark rooms. In the basement is an assay laboratory, the laboratory for beginners, and store rooms. The department is well supplied with apparatus.

Coburn Hall.—Directly south of Fernald Hall is Coburn Hall, named in honor of Abner Coburn of Skowhegan, the chief benefactor of the University. It is a brick building, three stories in height. In the basement and on the first floor are located the reading rooms and the library, the laboratory and recitation room of the professor of agriculture, and the recitation room of the

professor of English. On the second floor are the botanical and entomological laboratories, and recitation rooms for the departments of biology, English, and modern languages. Over the library is the museum. The collections are large and constantly increasing. On the third floor are recitation rooms for the departments of civics and history, philosophy, and modern languages, the modern language seminary room, and the psychological laboratory.

ALUMNI HALL.—To the northeast of Coburn Hall stands the new Alumni Hall, erected in 1900, the largest of the recent additions to the university buildings. The front part contains on the ground floor the offices of the president, secretary, and cashier, a board room, two recitation rooms for the use of the military and mathematical departments, and the private office of the professor of mathematics; the second floor contains the university chapel, with a large pipe organ in the choir gallery. In the basement under the drill hall are the private offices of the military instructor and the physical director, the baseball cage, bowling alleys, lockers, lavatories, rooms for storage, etc. The dimensions of the drill hall and gymnasium are 100 by 62 feet. This room is encircled by a 9-foot running track suspended from the roof. As a gymnasium it is equipped with complete apparatus of the most approved kind.

THE OBSERVATORY.—The astronomical observatory stands upon a slight elevation to the east of Coburn Hall. The equatorial room is equipped with an eight-inch refractor of the best modern construction, with finding circles, driving-clock, filar micrometer and other accessories. In the transit-room is a Repsold vertical circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction in both descriptive and practical astronomy.

THE MACHINE SHOP.—In the rear of Fernald Hall is the machine shop, a wooden building 125 feet long and two stories high, containing the foundry, forge shop, carpenter shop, machine shop and tool room. The building is thoroughly equipped. An adjoining building, 30 by 71 feet, contains two boilers, of one hundred and fifty, and one hundred horse power, respectively, a

fifty horse power Corliss engine, a fifteen horse power Otto gasoline engine, and the dynamos and storage battery, which comprise the lighting plant. Students in the Electrical Engineering Course receive instruction in the care and running of this equipment.

THE EXPERIMENT STATION BUILDING.—South of Alumni Hall stands a two-story brick building with basement, which is occupied by the Agricultural Experiment Station. In the basement are rooms for the storage and preparation of samples for analysis, the calorimeter room, and the boiler room. On the ground floor are the chemists' office, the laboratories used in the analysis of foods and feeding stuffs, the nitrogen room, and the laboratory used in the analysis of fertilizers. On the second floor are the general office, the director's office, the bacteriological laboratory, the journal room, and a storage room for books and pamphlets. The building is heated by steam, supplied with gas and electricity, and thoroughly equipped with apparatus.

THE HORTICULTURAL BUILDING.—East of the Experiment Station is the Horticultural Building, consisting of a head-house and three greenhouses. In the head-house are the office of the professor of horticulture, a work room, a seed storage room, a photographing room, the janitor's room, and a room used for storage. The main greenhouse, 20 feet by 100 feet, is devoted to the use of the Experiment Station, and to the instruction of students. A second structure, 20 feet by 80 feet, running parallel to the main greenhouse, is divided, one-half being used for growing plants, and the remainder as a potting and storage room. The third greenhouse is designed for investigations in plant nutrition. In the south end of this house is the conservatory.

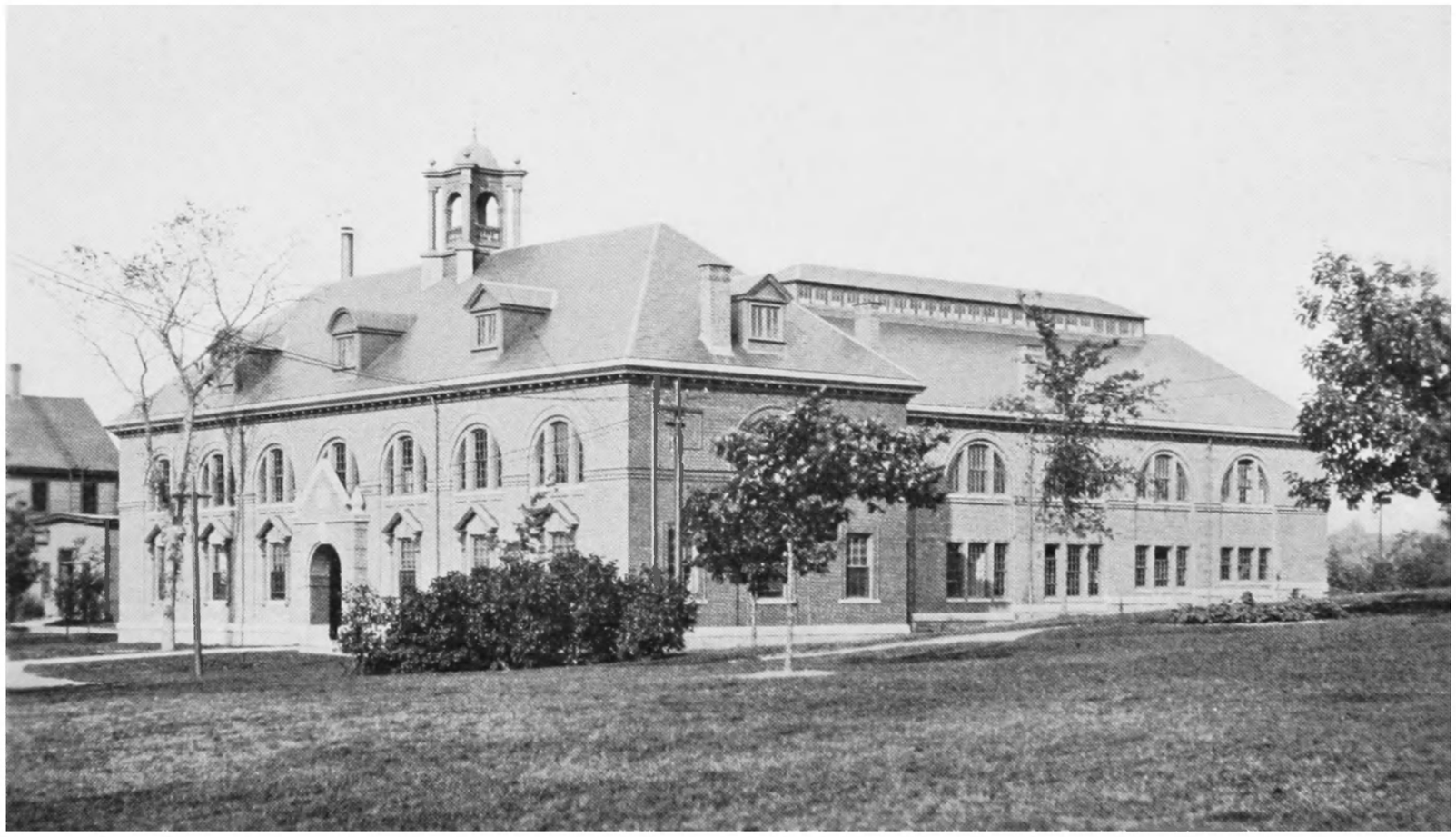
THE DAIRY BUILDING.—The Dairy Building, 50 feet by 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese curing room, a lecture room, the office of the professor of animal industry, and a laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese. The building is heated with steam and supplied with hot and cold water. Power is furnished by a six horse power engine.

THE MT. VERNON HOUSE.—This is a wooden building, completed in 1898, to furnish dormitory accommodations for women. It is situated near the recitation and laboratory buildings, upon a site overlooking the campus, and commanding a magnificent view of the river, villages, and mountains. It is two stories in height, built in the old colonial style and consists of a long central portion and two wings. It contains a parlor, dining room, kitchen, bath room, and sixteen study rooms, each intended for two students. The rooms are large, well lighted, heated by a combined system of hot air and hot water, and provided with electric lights from the university plant. A special feature is the long hall on each floor, extending sixty-six feet upon the front of the building, and wide enough to serve as an assembly or study room. The building, and the students who live in it, are under the supervision of a competent matron.

THE FRATERNITY HOUSES.—Four of the student fraternities occupy club houses. Three of the houses are on the campus, and one in the village of Orono. They are large, well arranged houses, affording rooms for about twenty-five students each. Several of the fraternities maintain their own boarding establishments under the supervision of matrons.

THE ART MUSEUM.—The collection of casts, framed pictures, photographs, and engravings belonging to the University Guild has recently been given new quarters in the frame building formerly used as a gymnasium. During the summer of 1901 this building was moved to a point a little northeast of Wingate Hall, and remodeled at an expense of several hundred dollars. Its main room for exhibition purposes measures 30x40 feet, and contains nearly a thousand dollars worth of apparatus of illustrative value in connection with the lectures on the history of art, which are now given here.

OTHER BUILDINGS.—In addition to the buildings already described, there are six others devoted to various purposes. Among these are the President's house, the Commons or general boarding house, and three residences occupied by members of the faculty.



ALUMNI HALL

THE ATHLETIC FIELD.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northwestern extremity of the campus, about 1,200 feet from the Gymnasium. It contains a quarter-mile cinder track, with a 220 yards straightaway, and is graded and laid out for foot ball, base ball, and field athletics.

THE LIBRARY

The library is located in Coburn Hall. It contains over twenty-one thousand bound volumes and eight thousand pamphlets. Some fifteen hundred volumes of special value to the Experiment Station are kept in the Station building; and nearly three thousand law books, in the School of Law. Reference libraries in departmental rooms are maintained by those departments which require them.

Nearly half of the volumes in the library have been added within the last four years, the accessions having averaged more than twenty-five hundred annually during this period; the greater part of these have been acquired by purchase, and in large part have been selected by the heads of departments with particular reference to making the collections of the greatest working value. The time and manner of the selection and purchase of the books result in a particularly useful collection.

The library is classified according to the Dewey system, slightly modified; there is a card catalogue, author and subject; access to the shelves is entirely unrestricted. Students may borrow two volumes at a time, to be retained two weeks, when they may be renewed unless previously called for; special permission to borrow a larger number may be obtained, when necessary, upon application to the librarian; there is a fine of two cents a day for books kept over time. Officers and alumni of the University may borrow any reasonable number of volumes without time limit, except that all books must be returned at least nine days before Commencement, and the return of any volume may be required

at any time by the library committee. Other responsible persons may obtain the privileges of the library upon application to the librarian. The librarian and his assistants are glad to give advice and assistance at any time.

The library is a designated depository for the publications of the United States Congress, and also receives publications of different departments not included in the depository set. All the publications of the State of Maine are received. Over three hundred and fifty of the most important literary, scientific and technical periodicals, both American and foreign, are regularly received. The leading papers of Maine, together with a selected list of daily papers published in the large cities, are on file.

The library is open daily from 8 A. M. to 12.00 M., and from 1.30 to 5.30 P. M., Sundays and legal holidays excepted.

MUSEUM AND HERBARIUM

The museum is located in the wing of Coburn Hall. The mineral cabinet embraces a general collection of three hundred species of the more common minerals, a collection of economic minerals furnished by the National Museum, an educational series of rocks, from the U. S. Geological Survey, and a collection of the more important fragmental, crystalline, and volcanic rocks.

There is a small collection of plant and animal fossils, a set of type exotic mammals, a number of the larger mammals of the State, and working collections of the lower group of both vertebrate and invertebrate animals.

The herbarium comprises the original collection of Maine plants of about 500 species; the new collection of Maine plants of 800 species; the Blake herbarium of 7,000 species, including phænogams and cryptogams Ellis and Everhard's North American Fungi, comprising thirty-five centuries; Halsted's Lichens of New England; Underwood's Hepaticæ; Cummings and Seymour's North American Lichens; Cook's Illustrative Fungi; Collins's Algæ of the Maine Coast; a collection of illustrative

cryptogams in boxes; Harvey's Weeds and Forage Plants of Maine, 300 species; Halsted's Weeds; a collection of grasses and forage plants of 400 species; a collection of United States woods prepared by the United States Department of Agriculture; a collection of seeds and fruits.

ORGANIZATIONS

FRATERNITIES.—The following fraternities are represented in the University: Φ Γ Δ, Β Θ Π, Κ Σ, Δ Τ Ω, Φ Κ Σ, Σ Α Ε, Δ Ρ, Φ Γ (for women).

ASSOCIATIONS.—The following is a list of other organizations existing in the University: Scientific Association, Philological Club, French Club, University Guild, Debating Society, Electrical Society, Honorary Society (Phi Kappa Phi), Young Men's Christian Association, Athletic Association, Press Club, Glee Club, Instrumental Club, Band, Photographic Society.

THE SCIENTIFIC ASSOCIATION.—The Scientific Association was organized to promote interest in scientific study and investigation in various departments. It holds a general meeting once a month, and is divided into four groups, each of which has its own stated meetings. Papers describing original work, and those of a more popular nature, are presented from time to time.

THE PHILOLOGICAL CLUB.—The Philological Club meets on the first Monday evening of each month except January, during the academic year, for the presentation and discussion of original papers on philological and literary subjects.

THE UNIVERSITY GUILD.—The University Guild has for its object the building up of an art collection, and the promotion of a general interest, among the faculty, students, and friends of the University, in the study of the fine arts. The Guild occupies the new Art Museum and holds four regular meetings during the

year. As rapidly as funds permit, casts and photographs of celebrated works of art are being added to the collection already begun.

The course in the history of Italian painting is open to members of the Guild.

PHI KAPPA PHI.—The Phi Kappa Phi is an honorary society. At the end of the fall term of the senior year the five members of the class having the highest standing are elected members, and at the end of the year the five next highest are added.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION.—The Young Men's Christian Association, composed of students, has for its object the promotion of Christian fellowship and aggressive Christian work.

UNIVERSITY PUBLICATIONS

THE ANNUAL CATALOGUE OF THE UNIVERSITY OF MAINE.—This contains descriptions of the courses of study, lists of the trustees, faculty, and students, and other information relating to the University.

THE SHORT CATALOGUE OF THE UNIVERSITY OF MAINE.—This is an abbreviated form of the catalogue.

THE ANNUAL REPORT OF THE TRUSTEES, PRESIDENT, AND TREASURER, TO THE GOVERNOR AND COUNCIL OF THE STATE.—The reports of the trustees and president include an account of the general affairs and interests of the University for the year, and the reports of the Experiment Station. The report for the odd years contains the biennial catalogue of graduates.

THE UNIVERSITY OF MAINE STUDIES.—These are occasional publications containing reports of investigations or researches made by university officers or alumni.

THE UNIVERSITY CIRCULARS.—These are occasional pamphlets, issued for special purposes. Those now ready for distribution relate to: the Classical and Latin-Scientific Courses; the Courses in Agriculture; the Courses in Pharmacy; the School of Law; the Courses in Engineering; Student Expenses.

THE MAINE BULLETIN.—This is a small publication issued several times each year by the University, to give information to the alumni.

THE ANNUAL REPORT OF THE EXPERIMENT STATION.—This is Part II of the Annual Report of the University.

THE EXPERIMENT STATION BULLETINS.—These are popular accounts of the results of station work which relate directly to farm practice.

THE CAMPUS.—This is a journal published semi-monthly during the university year by an association of the students.

THE PRISM.—This is an illustrated annual, published by the junior class.

MILITARY INSTRUCTION

Military instruction is required by law. The department is under the charge of an officer of the regular army, detailed by the President of the United States for this purpose. Cadet rifles, ammunition, and accoutrements are furnished by the War Department. The course has special reference to the duties of officers of the line. The students are organized into an infantry battalion of three companies, a band, and a signal corps, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules established by the President of the United States.

The uniform prescribed by the board of trustees is as follows:

For cadets, a dark blue blouse, cut military academy style, braided with black braid and without other ornament than the word MAINE embroidered in gold on each side of the collar; light blue trousers with dark stripe and blue cap, army regulation style, with cross rifles and the letters U. M. embroidered in gold on the front. For commissioned officers, the regulation fatigue uniform prescribed for infantry officers of the United States Army; for non-commissioned officers, the same uniform as for cadets, with the addition of gilt chevrons on arms of blouse. The total cost of uniforms for all ranks is $13.70. The uniforms are procured through an authorized tailor, and are made in the best manner of thoroughly good material. Cadets are required to wear the uniform when on military duty, and may wear the same at other times, provided the complete uniform is worn.

The three seniors who attain the highest standing in the military department are reported to the Adjutant General of the U. S. Army, and their names are printed in the U. S. Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

Service in the military department is optional for members of the senior class that have not received appointments as officers.

PHYSICAL TRAINING

The new gymnasium, completed in the spring of 1901, affords unexcelled opportunities for physical training and in-door athletics.

On the first fioor are the baseball cage and bowling alley, lockers, baths and toilet rooms for the accommodation of three hundred and seventy-five students, with space to enlarge these accommodations when necessary.

The gymnasium proper is on the second floor, which has a floor space of 6,550 square feet, with a running track overhead. This main room of the gymnasium is equipped with a large variety of light and heavy gymnastic apparatus and many of the best patterns of modern developing appliances.

Gymnasium work consisting of drills with Indian clubs, dumb-bells, wands and bar-bells, also exercises on the heavy apparatus, and gymnasium games, is required of freshmen and sophomores from November 15th to April 15th.

Beginning with the fall of 1902, a physical examination of each student will be made, together with measurements and strength tests. From the data thus procured special exercises will be prescribed with a view to the systematic development of the entire physical system.

PUBLIC WORSHIP

Religious services of a simple character are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services, under the direction of the Young Men's Christian Association, are held weekly.

GENERAL REGULATIONS

The regulations in regard to the selection of studies, standings and grades, absences from recitation and examinations, rhetorical exercises, entrance conditions, leave of absence, attendance upon chapel, penalties, examinations, and athletics, are printed in a small pamphlet, which may be obtained from the secretary.

By these regulations, the quota of regular studies for each student varies from a minimum of fifteen hours, to a maximum of twenty hours of class room work each week. In the application of this rule, two hours of laboratory work, or of other exercises not requiring preparation, count as one hour.

Excuses for absence from individual exercises are not required. Each student is expected to be present at all recitations and other exercises except when imperative reasons require absence. Of

these reasons he is the judge, but a student who is absent from ten per cent. or more of the exercises in any study is not admitted to the final examination. A student who fails to pass at an examination, is absent from an examination, or is excluded from an examination, may make up his deficiency at the special examinations held at the times noted in the calendar. The arrearage examinations during the Christmas recess include only studies of the spring term; the examinations during the Easter recess include only studies of the fall term; the examinations at the beginning of the fall term include studies of the whole year. A student who fails to make up an arrearage before the study is again taken in class is required to attend recitations in that study.

Each student is given a report of his work shortly after the close of each term. Parents or guardians may obtain these reports upon application to the secretary.

SCHOLARSHIP HONORS

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average standing, after the freshman year, of ninety on a scale of one hundred. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations or an equivalent. The methods of work are determined by the instructor. The list of honor courses, with full description, is published by the secretary of the faculty four weeks before Commencement. Honor courses are open to juniors and seniors who have attained an average standing of eighty per cent. in all previous work, and an average standing of ninety per cent. in the previous work of the department in which the honors are sought. A student cannot register for an honor course without the consent of the faculty, nor later than the fourth week of the fall term. Upon completion of a course, the student's work will be tested by an examination or thesis, or both, under the direction of the faculty committee on honor

courses; and the result, together with the instructor's report, will be laid before the faculty. The faculty may grant special honors to those students who receive the approval of the committee, but will not do so if the general work is unsatisfactory. Honors, and their nature, are stated upon the Commencement program and published in the annual catalogue.

DEGREES

The degree of Bachelor of Arts (B. A.) is conferred upon students that complete the Classical Course.

The degree of Bachelor of Philosophy (B. Ph.) is conferred upon students that complete the Latin-Scientific Course.

The degree of Bachelor of Science (B. S.) is conferred upon students that complete the Scientific, Chemical, Preparatory Medical, Agricultural, Civil Engineering, Mechanical Engineering, Electrical Engineering, or Pharmacy Course. The diploma indicates which course has been completed.

The degree of Pharmaceutical Chemist (Ph. C.) is conferred upon students that complete the Short Pharmacy Course.

The degree of Bachelor of Laws (LL. B.) is conferred upon students that complete the Law Course.

Advanced Degrees

For receiving an advanced degree the required preparation must include the attainment of the proper first degree.

The Master's degrees, viz., Master of Arts (M. A.), Master of Philosophy (M. Ph.), Master of Science (M. S.), and Master of Laws (LL. M.), are conferred upon holders of the corresponding Bachelor's degrees under either of the following conditions:

(1) One year's work in residence, including examinations on a prescribed course of study, and the presentation of a satisfactory thesis. The course for each candidate must be approved by the committee on advanced degrees not later than the first week in October. A registration fee of $10.00 is charged.

(2) Two years' work in absence, with examinations at the University, the other conditions as in (1).

The professional degrees of Civil Engineer (C. E.), Mechanical Engineer (M. E.), and Electrical Engineer (E. E.), may be conferred upon graduates of the Civil Engineering, Mechanical Engineering, and Electrical Engineering Courses respectively on the presentation of a satisfactory thesis after at least three years of professional work subsequent to graduation.

STUDENT EXPENSES

Many students go through college with an annual expenditure of little more than $200, exclusive of the expense of clothing, traveling and vacations, and very many earn a part of this sum by vacation work. An estimate of the necessary annual expenses of a student in any department, except the School of Law, may be made from the following table. For the expenses of students in the School of Law reference is made to the article on that School. It should be noticed that clothing, traveling, and vacation, society and personal expenses are not included in the table. These vary according to individual tastes and habits. The table is made up for men students who room in Oak Hall, and board at the Commons. The necessary expenses of other students are sometimes lower, but usually slightly higher. In all cases an allowance must be made for personal incidental expenses. The expenses of the first year are higher than those of later years.

ANNUAL STUDENT EXPENSES

Tuition, 2 terms at $15.00,	$30 00
Registration fee, 2 terms at $5.00,	10 00
Incidentals, 2 terms at $10.00,	20 00
Laboratory fees, average, about,	8 00
Text-books, about,	15 00
Board, 34 weeks at $3.00,	102 00
Heat and light for half room, and general care of dormitory, about,	15 00
Total,	$200 00

The tuition charge is $15.00 a term, or $30.00 a year, and all students are subject to this charge except those in the short winter courses in agriculture, for which no tuition charge is made. Residents of Maine who need assistance and maintain a good record may obtain, from the University, loans to cover the tuition charge. The regulations in regard to these loans are stated in the article on loans.

The registration fee of $5.00 must be paid at the beginning of each term before the student enters any classes.

The incidental fee is $10.00 a term, or $20.00 a year, and covers heat and light for public buildings, reading-room charges, care of public rooms, and miscellaneous expenses.

The cost of text-books will average about $15.00 a year for the course. These may be bought from the librarian at cost, but must be paid for on delivery. The expense may be decreased by buying second-hand books and selling them after using them.

Students in the laboratories and shops pay certain charges to cover the cost of materials and maintenance. These charges are as follows:—botany, per term, $1.00; chemistry, per term, about $3.00; bacteriology, per course, $3.00; physics, per course, $2.00 to $4.00; pharmacy, per term, about $3.50; mineralogy, $2.00; biology, per course, $2.00; electrical engineering, per course, $2.50; mechanical engineering, per course, $5.00. Laboratory charges in the civil engineering course are very few, but traveling expenses incurred in visiting engineering works will be nearly equivalent to the laboratory expenses of other courses.

The largest item of expense is for board. At the Commons, the university boarding house, each student pays his share of the cost, varying from $2.75 to $3.00 a week. Board may be obtained in clubs or private families at prices ranging from $2.50 to $3.25 a week.

Rooms in Oak Hall, the men's dormitory, are free; but, students supply their own furniture, and pay for heat and light, for the lighting and care of the halls and public rooms of the dormitory, and for damages. These charges, exclusive of furniture, may be expected to be about $15.00 a year for each student, when two occupy a room. Furnished rooms, with light and heat, may be obtained in the village for $1.50 a week if occupied by one person, or $2.00 a week if occupied by two persons.

Women students that do not live at their own homes are required to room and board at the Mt. Vernon House. The price of board is $3.00 a week. No charge is made for the rent of rooms; but students provide their own furniture, take care of their rooms, pay for the heat and light of their rooms, and for the heat, light and care of the halls and public rooms. These items are all provided at cost. Students are charged for all damages done to university property or to that of other students.

Each student is required to deposit with the treasurer a bond, with two good names as sureties, in the amount of $150.00, to cover term bills. Blanks on which bonds should be made out will be furnished by the secretary upon application. Those who keep a sufficient deposit with the treasurer to cover the bills of one term will not be required to furnish a bond. The deposit required is $90.00 from those who board at the Commons or Mt. Vernon House, and $30.00 from others. No student will be graduated who is in debt to the treasury.

A circular containing a fuller statement in regard to expenses, and treating of the opportunities for self-help, may be obtained upon application.

LOANS

Tuition Loans

Residents of Maine that need assistance and maintain a satisfactory record may borrow from the university treasury a sum sufficient to pay the tuition charge. This privilege is not extended to students in the School of Law.

Borrowers are required to give endorsed notes or other satisfactory security. The loans bear interest at six per cent. per annum, and are due $30.00 a year, beginning with the first year after graduation, but may be paid earlier. No member of the faculty is accepted as an endorser.

Loans are granted by a committee consisting of the president and two other members of the faculty. The number of loans may not exceed one-third of the number of students in the undergraduate departments. Loans are granted to cover the tuition charges of one year at a time.

The first grant of loans for each university year is made in June preceding. Applications for loans are considered during May, and to insure attention at this time should be forwarded to the President not later than May 15. A second award is made in the fall term. Applications should be made not later than October 10. They must be made to the President upon blanks to be obtained from the Secretary of the faculty. Awards made in June may be withdrawn from students who do not register, or claim their loans, by October 10.

The Kittredge Loan Fund

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittredge of Bangor. It is in the control of the president and treasurer of the University, by whom it is loaned to needy students. In the deed of gift it was prescribed that no security but personal notes bearing interest at the prevailing rate should be required. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES

The Kidder Scholarship.—The Kidder Scholarship was endowed by Frank E. Kidder, Ph. D., Denver, Colorado, a graduate of the University in the class of 1879, to be awarded to a member of the junior class to be selected by the President and the Faculty.

The Junior Exhibition Prize will be awarded to that member of the junior class who shall present the best oration at the junior exhibition. In the award of this prize both the composition and the delivery of the oration will be considered.

The Sophomore Declamation Prize, for excellence in elocution, will be awarded to the best speaker in the sophomore class.

THE LIBBEY PRIZE, the gift of the Hon. Samuel Libbey, Orono, will be awarded to the student who shall present the best essay upon an agricultural topic. The essays must be handed to the professor of agriculture on or before the first Monday in June.

THE WALTER BALENTINE PRIZE, the gift of Whitman H. Jordan, Sc. D., Geneva, N. Y., a graduate of the University in the class of 1875, will be awarded to that member of the junior class who shall excel in biological chemistry.

THE KENNEBEC COUNTY PRIZE, the gift of the Hon William T. Haines, Waterville, a graduate of the University in the class of 1876, will be awarded to that member of the senior class who shall write the best essay on applied electricity.

THE FRANKLIN DANFORTH PRIZE, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University in the class of 1877, in memory of his father, Franklin Danforth, will be awarded to that member of the senior class in the agricultural course who shall attain the highest standing.

THE PHARMACY PRIZE will be awarded to that student in the Pharmacy Department who shall attain the highest standing in chemistry in the last year of his course.

THE AMERICAN SCHOOL IN ROME

Graduates of this University, which is one of the institutions co-operating with the American School of Classical Studies in Rome, are entitled to free tuition in that school. The school awards annually to Bachelors of Arts, chiefly on the basis of competitive examination, two fellowships in Roman Classical Archæology, each with a stipend of $600.00, and one in Christian Archæology, with a stipend of $500.00.

ADMISSION

Applicants for admission must pass the required examinations, or present satisfactory certificates of fitness, and file with the Treasurer a bond for $150 signed by two bondsmen, as security for the payment of term bills. A cash deposit covering the bills of one term will be accepted in place of a bond. In the School of Law the fees must be paid in advance, and no bond or deposit is required. The University admits men and women, both residents of Maine and non-residents.

Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they propose to enter, or in other equivalent studies. Certificates from approved schools are accepted for the preparatory work, but not for any part of the college work, unless done in a college. A student who has accomplished half of the preparatory course may be examined on that part, and receive credit therefor.

The attention of students preparing for the entrance examinations is called to the need of careful work in mathematics. A good preparation in algebra and geometry is most important for those who expect to enter engineering courses. The schools should give a part of the work in algebra and geometry, or a review of these subjects, during the last year.

Students preparing for the Classical or Latin-Scientific courses should devote special attention to Latin composition, Roman history, and constant practice in pronouncing Latin according to the Roman method.

Persons, not candidates for a degree, who wish to take special studies, may be permitted to do so upon giving satisfactory evidence that they are prepared to take the desired studies. If they subsequently desire to become candidates for a degree, or to take a regular course, they will be required to pass the entrance examinations.

No examinations are required for admission to the short winter courses.

College graduates who wish to enter a technical course are admitted to the junior class without examination. Students in general college courses, who expect to pursue technical courses after graduation, should avail themselves of opportunities for the study of mathematics, physics, chemistry, and drawing, as a preparation for engineering courses; and of physics, chemistry, and drawing, for chemical and biological courses.

Admission to the School of Law

Graduates of a college, or of a preparatory school of good standing, are admitted without examination. Other applicants must give satisfactory evidence of the necessary qualifications. These are fixed in each case on a consideration of its merits.

Students from other law schools of good standing are admitted to the appropriate classes in this school upon certificate. Students from law offices are admitted to advanced standing after passing a satisfactory examination upon the earlier subjects of the course. Members of the bar of any State are admitted to the senior class without examination.

Special students, not candidates for a degree, are admitted without examination.

ENTRANCE EXAMINATIONS

Examinations are held at Orono, beginning two days before the opening of the fall term, and on the day after Commencement. To save expense to candidates, examination papers will be sent to any satisfactory person who will consent to conduct examinations on these days. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University accompanied by the indorsement of the examiner. Applications for such examinations must be made out on blanks to be obtained from the secretary of the faculty.

Candidates for the Classical Course are examined on—*Language,* English, Latin, Greek, and either French or German; *History,* Roman, Greek; *Mathematics,* Plane Geometry, Algebra.

Candidates for the Latin-Scientific Course are examined on—*Language,* English, Latin, and either French or German; *History,* Roman; *Mathematics,* Plane Geometry, Algebra.

Candidates for the Scientific Course are examined on—*Language,* English, and one year of a foreign language, either ancient or modern; *History,* One of the following,—General, Roman, Greek, English; *Mathematics,* Plane Geometry, Alge-

A FRATERNITY HOUSE

bra; *Science,* Two of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for the CHEMICAL, AGRICULTURAL (four years), PREPARATORY MEDICAL, AND PHARMACY (four years) COURSES are examined on—*Language,* English, and one year of a foreign language, either ancient or modern; *Mathematics,* Plane Geometry, Algebra; *Science,* Two of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for the CIVIL ENGINEERING, MECHANICAL ENGINEERING, AND ELECTRICAL ENGINEERING COURSES are examined on—*Language,* English, and one year of a foreign language, either ancient or modern; *Mathematics,* Plane and Solid Geometry, Algebra; *Science,* Two of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for SHORT COURSES IN AGRICULTURE (one year or more) are examined on—*Elementary Subjects,* Arithmetic, English Grammar, Physiology; *Language,* English; *History,* United States; *Mathematics,* Algebra through simple equations of the first degree; *Science,* One of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for the SHORT COURSE IN PHARMACY (two years) are examined on—*Elementary Subjects,* Descriptive Geography, Arithmetic, English Grammar, Physiology; *History,* United States; *Mathematics,* Algebra through simple equations of the first degree.

SUBSTITUTES.—One year of Latin will be accepted as a substitute for any one of the following groups: (a) Geography, Arithmetic, English Grammar, and Physiology; (b) French or German; (c) One science.

One year of French or German will be accepted as a substitute for either of the following groups: (a) Geography, Arithmetic, English Grammar, Physiology; (b) One science.

Other equivalents will be accepted for any of the requirements except Mathematics, Latin, or Greek.

In consideration of the recent addition of one year of a foreign language, and of solid geometry, to the requirements, students who are not able to offer these subjects, but are otherwise prepared, will be admitted without them, and allowed to make them up after admission. This privilege will be withdrawn after 1902.

For the requirements for admission to the School of Law, see the article on the School of Law, page 116. 4

ENTRANCE REQUIREMENTS

The stars indicate the studies required.

For requirements of the School of Law see page 116.

COLLEGE OF	ARTS AND SCIENCES					AGRICULTURE		ENGINEERING			PHARMACY	
COURSE	Classical	Latin Scientific	Scientific	Chemical	Preparatory Medical	Four years	Special	Civil	Mechanical	Electrical	Four years	Two years
Language:												
English	*	*	*	*	*	*	*b	*	*	*	*	*b
French	*c	*c	*d	*d	*d	*d	.....	*d	*d	*d	*d	.....
German												
Latin	*	*										
Greek	*	.....										
History:												
United States	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	*
General	.....	.....	*e	.....	.....	.....	.....	.....	.....	.....	.....	.....
Roman	*	*										
Greek	*	.....										
English	.....	.....										
Mathematics:												
Plane Geometry	*	*	*	*	*	*	.....	*	*	*	*	
Solid Geometry	.....	.....	.....	.....	.....	.....	.....	*f	*f	*f	.....	.....
Algebra	*	*	*	*	*	*	*g	*	*	*	*	*g
Science: a												
Botany	.....	.....	*h	*h	*h	*h	*i	*h	*h	*h	*h	.....
Chemistry												
Physical Geog.			*	*	*	*		*	*	*	*	
Physics												
Elementary: a												
Geography	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*
Arithmetic	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	*
Physiology	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	*

a—One year of a foreign language, ancient or modern, will be accepted as a substitute for all the elementary studies, or for one science. *b*—English grammar only. *c*—One year of French or German. *d*—One year of a foreign language, either ancient or modern. In consideration of the recent addition of this requirement, candidates who cannot satisfy it, but are otherwise well prepared, will be allowed to make it up as an extra study after admission. This privilege will be discontinued after 1902. *e*—One from general, Roman, Greek, or English history. *f*—See page 45. *g*—Through simple equations of the first degree only. *h*—Two sciences, from the list of four, are required. *i*—One science, from the list of four, is required.

ENTRANCE REQUIREMENTS

The following statements will show in detail the requirements in each subject.

Language

ENGLISH.—*Grammar.* The usual school course. Attention should be given to punctuation and the use of capital letters.

Reading and Practice. Each candidate will be required to present evidence of a general knowledge of the substance of the books mentioned below and to answer simple questions on the lives of their authors. The examination will usually be the writing of one or two paragraphs on each of several topics. The treatment of these topics is designed to test the power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of this test the candidate may present an exercise book, certified by his instructor, containing compositions or other written work done in connection with the reading of the books.

In 1902 this part of the examination will be based upon: Shakespeare's Merchant of Venice; Pope's Iliad, books I, VI, XXII, and XXIV; the Sir Roger de Coverley Papers in the Spectator; Goldsmith's The Vicar of Wakefield; Coleridge's The Ancient Mariner; Scott's Ivanhoe; Cooper's The Last of the Mohicans; Tennyson's The Princess; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

In 1903, 1904, and 1905, it will be based upon: Shakespeare's Merchant of Venice and Julius Cæsar; the Sir Roger de Coverley Papers in the Spectator; Goldsmith's Vicar of Wakefield; Coleridge's Ancient Mariner; Scott's Ivanhoe; Carlyle's Essay on Burns; Tennyson's Princess; Lowell's Vision of Sir Launfal; George Eliot's Silas Marner.

Study and Practice. This part of the examination presupposes a careful study of the works named below. The examination will be upon subject-matter, form, and structure; and will also test the candidate's ability to express his knowledge with clearness and accuracy.

In 1902, this part of the examination will be based upon: Shakespeare's Macbeth; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

In 1903, 1904, and 1905, it will be based upon: Shakespeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and on Addison.

FRENCH.—A good elementary knowledge of grammar and composition; ability to read at sight easy prose. These requirements should be satisfied by one year's instruction of five periods per week in the preparatory school. Attention to correct pronunciation is strongly advised.

GERMAN.—A good elementary knowledge of grammar and composition; ability to read at sight easy prose. These requirements should be satisfied by one year's instruction of five periods per week in the preparatory school. Attention to correct pronunciation is strongly advised.

LATIN.—The grammar, including prosody; Cæsar's Gallic War, books I-IV; Cicero's four orations against Catiline, and those for Archias and for the Manilian Law; Vergil's Eclogues and the Æneid, books I-VI; the sight translation of Latin passages of moderate difficulty; the translation into Latin of simple English sentences, and of easy narrative passages based on the prose authors read. For the last, a vocabulary of unusual words will be furnished. Equivalent readings will be accepted for those prescribed.

GREEK.—The grammar, including prosody; Xenophon's Anabasis, books I-IV; Homer's Iliad, books I-III; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last, a vocabulary of unusual words will be furnished. Equivalent readings will be accepted.

HISTORY

GENERAL HISTORY.—A knowledge such as may be obtained from Myers's General History.

ROMAN HISTORY.—A knowledge such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, to the death of Marcus Aurelius.

GREEK HISTORY.—Pennell's, or Myers's, History of Greece, to the capture of Corinth, 146 B. C.

ENGLISH HISTORY.—A knowledge such as may be obtained from Montgomery's History of England.

UNITED STATES HISTORY.—A knowledge such as may be obtained from Higginson's History of the United States.

MATHEMATICS

PLANE GEOMETRY.—The first five books of Wells's, or of Wentworth's Geometry, or an equivalent. Numerical exercises, original propositions and the neat and careful construction of figures should not be neglected. The examination will include original propositions for demonstration or construction.

SOLID GEOMETRY.—Books VI-IX of Wells's, or books VI-VIII of Wentworth's Geometry, or an equivalent. The examination will be planned to test the candidate's ability to apply the theorems to the computation of surfaces and volumes, as well as his readiness in demonstration. Required only of candidates for the engineering courses.

As this is a new requirement, and is not taught in all preparatory schools, students who cannot offer it, but are otherwise well prepared, are allowed to take it as an extra study after admission. This privilege will be withdrawn after 1902.

ALGEBRA.—The elements, equations of the first degree, radicals, the theory of exponents, quadratic equations, ratio and proportion, arithmetical and geometrical progression, the binomial theorem. Candidates for special courses in agriculture or for the short course in pharmacy will be examined on no topics beyond simple equations of the first degree. A satisfactory preparation may be obtained from Newcomb's, Wells's Academic, or Wentworth's School Algebra.

SCIENCE

BOTANY.—An elementary course which will bring the student into contact with plants. Gray's Lessons in Botany, Spaulding's Introduction to Botany, or Bergen's Elements of Botany, will serve as a satisfactory guide.

CHEMISTRY.—The necessary ground is covered by the following text-books: Fisher, Remsen, Roscoe (inorganic part), Shepard, Storer and Lindsay, Williams.

PHYSICAL GEOGRAPHY.—A satisfactory preparation may be obtained from Appleton's Physical Geography.

PHYSICS.—A satisfactory treatment of this subject may be found in Avery's, or Gage's Physics.

ELEMENTARY SUBJECTS

DESCRIPTIVE GEOGRAPHY.—The usual school course. Required for short course in pharmacy only.

ARITHMETIC.—The usual school course, including the metric system of weights and measures. Required for the short courses only.

PHYSIOLOGY.—Cells and tissues, skeleton, muscles, blood and circulation, respiration, nutrition and digestion, lymphatic system, excretory organs, nervous system, special senses, hygiene. Required for the short courses only.

ADMISSION BY CERTIFICATE

Certificates for admission to the freshman class are accepted from graduates of approved schools, but will not be accepted from non-graduates except in extraordinary cases, and then only provided the candidate is expressly recommended for admission by the principal of the school from which he comes. Certificates must be made out on blanks furnished by the University.

Any preparatory school whose course of instruction covers in a satisfactory manner the requirements for admission may be placed upon the list of approved schools. Application for such approval should be made to the president of the University, and must be accompanied by a detailed statement of the course of study.

APPROVED SCHOOLS	PRINCIPAL
Athol (Mass.) High School,	F. C. Avery.
Bangor High School,	Henry K. White, M. A.
Bar Harbor High School,	Arthur M. Thomas, M. A.
Bath High School,	H. E. Cole, M. A.
Belfast High School,	W. R. Howard, B. S.
Bennington (Vt.) Academy,	W. S. C. Russell, M. A.
Berwick Academy, South Berwick,	F. Stanley Stebbins, B. A.
Biddeford High School,	Harry H. Burnham, M. A.
Boston (Mass.) English High School,	Robert Edward Babson, B. A.
Bowdoinham High School,	E. L. Palmer, B. A.
Boynton High School, Eastport,	Harry Edgar Bryant, B. A.
Brewer High School,	Harlan M. Bisbee, B. A.
Bridge Academy, Dresden Mills,	L. A. Bailey, M. A.
Bridgton Academy, North Bridgton,	C. C. Spratt, B. A.
Bridgton High School,	Charles Stone, B. A.
Bristol Academy, Taunton, Mass.,	Alfred B. Maggs, M. A.
Brunswick High School,	Charles Fish, M. A.

Calais High School,	Herbert S. Philbrick, M. A.
Caribou High School,	W. P. Hamilton, B. A.
Cherryfield Academy,	T. C. Tooker, M. A.
Coburn Classical Institute, Waterville,	F. W. Johnson, M. A.
Cony High School, Augusta,	C. F. Cook, B. A.
Cornish High School,	Stephen Rounds, B. A.
Corinna Union Academy,	W. Francis Miner, B. A.
Danforth High School,	W. L. Sanborn, B. A.
Deering High School,	William M. Marvin, B. A.
Dexter High School,	W. S. Brown, B. A.
East Corinth Academy,	Francis E. Russell, M. A.
East Maine Conference Seminary, Bucksport,	Simpson A. Bender, B. A., B. D.
Edward Little High School, Auburn,	J. F. Moody, M. A.
Ellsworth High School,	W. H. Dresser, B. A.
Farmington High School,	Charles M. Pennell, B. A.
Fort Fairfield High School,	F. C. Mitchell, B. S.
Foxcroft Academy,	Lyman K. Lee, B. A.
Framingham Academy and High School, Framingham Center, Mass.,	Alfred C. Fay, B. A.
Freeport High School,	Will O. Hersey, B. A.
Gardiner High School,	William L. Powers, M. A.
George Stevens Bluehill Academy, Bluehill,	Walter H. Russell, M. A.
Gorham High School,	Leon O. Glover.
Gould's Academy, Bethel,	F. E. Hanscom, M. A.
Greeley Institute, Cumberland Center,	Henry H. Randall, B. A.
Guilford High School,	George W. Snow, M. A.
Hallowell High School,	C. W. Stowell.
Hampden Academy,	Evangeline Taylor, B. A.
Hebron Academy,	W. E. Sargent, M. A.
Higgins Classical Institute, Charleston,	H. Warren Foss, B. A.
Hyde Park (Mass.) High School,	Merle S. Getchell, M. A.

Island Falls High School,	San Lorenzo Merriman, B. A.
Jordan High School, Lewiston,	John M. Nichols, M. A.
Leavitt Institute, Turner Center,	Leland A. Ross, B. A.
Limerick Academy,	William A. Hawthorne, B. A.
Limington Academy,	B. M. Clough, B. A.
Lincoln Academy, Newcastle,	George H. Larrabee, M. A.
Lisbon High School,	A. E. Linscott, B. A.
Lisbon Falls High School,	Leander H. Moulton, M. A.
Lubec High School,	Oscar C. Merrill, B. A.
Lynn (Mass.) English High School,	Charles S. Jackson, B. S.
Machias High School,	D. Lyman Wormwood, B. A.
Madison High School,	Thomas A. Roberts, B. A.
Maine Central Institute, Pittsfield,	F. U. Landman, B. A.
Maine Wesleyan Seminary and Female College, Kent's Hill,	Henry E. Trefethen, M. A.
Mechanic Falls High School,	Harry B. Walker, B. A.
Melrose (Mass.) High School,	William C. Whiting.
Monmouth Academy,	Arthur J. Chick, B. A.
Monson Academy,	W. S. Knowlton, M. A.
Northboro (Mass.) High School,	C. L. Judkins.
North Brookfield (Mass.) High School,	C. N. Perkins, M. A.
North Yarmouth Academy, Yarmouth,	Rev. B. P. Snow, M. A.
Norway High School,	Albert M. Rollins, B. A.
Norwell (Mass.) High School,	A. G. Catheron, B. A.
Oakland High School,	F. L. Tapley.
Oldtown High School,	Harry T. Watkins, B. A.
Orono High School,	Nathan R. Smith, B. A.
Orange (Mass.) High School,	Charles L. Curtis, B. A.
Palmer (Mass.) High School,	Fred Wilder Cross, B. A.
Parsonsfield Seminary and Piper High School,	Frederick W. Ernst, M. A.
Patten Academy,	H. N. Gardner, B. A.
Pennell Institute, Gray,	C. W. Pierce, M. A.

Phillips Limerick Academy, Limerick,	William A. Harthorne, B. A.
Portland High School,	Albro E. Chase, B. A.
Plymouth (Mass.) High School,	George F. Kenney, B. A.
Presque Isle High School,	J. E. Roberts, B. A.
Richmond High School,	E. C. Megguire, M. A.
Ricker Classical Institute, Houlton,	Justin O. Wellman, B. A.
Rockland High School,	L. E. Moulton, B. A.
Rumford Falls High School,	Charles W. Cary.
Sanborn Seminary, Kingston, N. H.,	Z. Willis Kemp, Ph. D.
Skowhegan High School and Bloomfield Academy, Skowhegan,	William L. Bonney, M. A.
South Paris High School,	Hal. R. Eaton, B. A.
South Portland High School,	Simon M. Hamlin, B. A.
Thomaston High School,	Albert S. Cole, B. A.
Thornton Academy, Saco,	Edwin P. Sampson, M. A.
Warren High School,	Parker T. Pearson, B. A.
Washington Academy, E. Machias,	A. Sherman Harriman, B. A.
Waterville High School,	John E. Nelson, B. A.
Westbrook High School,	W. B. Andrews, M. A.
Westbrook Seminary, Deering,	O. H. Perry, B. A.
Whitefield (N. H.) High School,	William B. Noyes, B. A.
Wilton Academy,	Drew T. Harthorn, M. A.
Wiscasset Academy,	Charles S. Sewall, B. A.
Yarmouth High School,	Herbert M. Moore, B. A.

DEPARTMENTS OF INSTRUCTION

GREEK

PROFESSOR HUDDILSTON.

Gk 1. XENOPHON.—Hellenica, Books I-IV. Study of syntax, and daily exercises in writing Greek. *Four hours a week.* Fall term.

Gk 2. HOMER.—Odyssey, Books VI-X, and XII. The reading of the remaining books, in English translation, is required; assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.* Spring term.

Gk 3. ATTIC ORATORS.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Five hours a fortnight.* Fall term.

Gk 4. GREEK TRAGEDY.—Euripides's Medea and Sophocles's (Edipus Rex; required reading on the history of the Greek tragic drama. *Five hours a fortnight.* Spring term.

Gk 5. THUCYDIDES.—Book I. Assigned reading in Herodotus, and a comparative study of the three great historians of Greece. *Five hours a fortnight.* Fall term. Open to those who have taken courses 1 and 3.

Gk 6. ARISTOPHANES.—The Clouds and the Knights; lectures and collateral reading on the development of Greek comedy. *Five hours a fortnight.* Spring term. Open to students who have taken courses 2 and 4.

Gk 7. PLATO.—Selected dialogues. Lectures on the history of Greek philosophy with special reference to Plato and Aristotle. *Five hours a fortnight.* Fall term. Open to those who have taken courses 3 and 5.

Gk 8. PINDAR.—The Olympian and Pythian Odes; parallel reading on the history of Greek lyric poetry. *Five hours a fortnight.* Spring term.

Gk 9. GREEK SCULPTURE.—Lectures, illustrated by photographs and lantern slides. This course does not presuppose a knowledge of Greek, but is intended to serve as a general introduction to Greek fine arts. The interdependence of the arts and their relation to the life of the Greeks, as well as their relation to the world's subsequent art, receives considerable attention. *Five hours a fortnight.* Given in the fall term of odd years.

Gk 10. GREEK SCULPTURE.—A continuation of course 9 with a more particular study of Greek architecture. *Five hours a fortnight.* Given in the spring term of even years.

Gk 11. NEW TESTAMENT GREEK.—This course is intended for those who have no acquaintance with ancient languages, and, with course 12, is expected to give considerable facility in reading the narrative portions of the Greek Testament. It neither takes the place of preparatory Greek, nor counts toward a degree in the Classical course. It is open to all students, but to freshmen only on permission by the instructor. *Five hours a fortnight.* Given in the fall term of even years.

Gk 12. NEW TESTAMENT GREEK.—A continuation of course 11. Reading of the Gospels of John and Matthew; syntax. *Five hours a fortnight.* Given in the spring term of odd years.

Gk 13. GREEK PRIVATE LIFE.—Lectures, illustrated with lantern slides and photographs. Assigned reading. *Five hours a fortnight.* Given in the fall term of even years.

Gk 14. GREEK RELIGION.—A study of the chief divinities in ancient Greek religion with special reference to the various types as shown in sculpture and vase-paintings. Lectures and assigned reading. *Five hours a fortnight.* Given in the spring term of odd years.

Gk 15. GREEK PROSE COMPOSITION.—A course in writing Greek, intended to continue the work begun in Gk 1. *One hour a week.* Spring term.

Gk 18. GREEK PROSE COMPOSITION.—An advanced course consisting of the translation into Greek of narrative and rhetorical passages. *One hour a week.* Fall term.

Gk 19. GREEK PROSE COMPOSITION.—A continuation of course 18. *One hour a week.* Spring term.

At 1. ITALIAN ART.—The revival of the fine arts in Italy, with special reference to the history of painting in Tuscany and Umbria during the early Renaissance. Lectures and collateral reading. The work is illustrated by a large and growing collection of photographs and casts. *One hour a week.* Given in the fall term of even years.

At 2. ITALIAN ART.—A continuation of course 1, dealing chiefly with the masters of the high Renaissance in Florence and Rome. *One hour a week.* Given in the spring term of odd years.

At 3. ITALIAN ART.—Painting in the north of Italy, and the culmination of the Italian Renaissance in the Venetian masters. Lectures and collateral reading. *One hour a week.* Given in the fall term of even years.

At 4. ITALIAN ART.—A continuation of course 3. *One hour a week.* Given in the spring term of even years.

LATIN

PROFESSOR HARRINGTON.

Lt 1. LIVY AND CICERO.—Livy, History of Rome, Books XXI and XII; Cicero, De Senectute; Latin composition based upon the authors read. *Four hours a week.* Fall term.

Lt 2. HORACE.—Selections from the Satires, Epistles, Epodes and Odes; classical mythology. *Four hours a week.* Spring term.

Lt 3. PLAUTUS AND TERENCE.—The Captivi, Trinummus, or Menæchmi of Plautus; the Andria, Adelphœ, or Phormio of Terence; lectures on the development of Roman comedy. *Five hours a fortnight.* Fall term.

Lt 4. CICERO AND TACITUS.—Selected letters of Cicero; the Agricola and Germania of Tacitus. *Five hours a fortnight.* Spring term.

Lt 5. PLINY AND TACITUS.—Selected letters of Pliny the younger; readings in the Annals of Tacitus; studies in Silver Latinity. *Five hours a fortnight.* Given in the fall term of odd years. Open to students that have taken courses 1-4.

Lt 6. ROMAN LYRIC POETRY.—Selections from Catullus, Horace, and the Latin hymns of the Christian church; original research. *Five hours a fortnight.* Given in the spring term of even years. Open to students that have taken courses 1-4.

Lt 7. THE ROMAN ELEGIAC POETS.—Selections from Catullus, Tibullus, Propertius, and Ovid; original research. *Five hours a fortnight.* Given in the fall term of even years. Open to students that have taken courses 1-4.

Lt 8. THE ROMAN ELEGIAC POETS.—A continuation of course 7. *Five hours a fortnight.* Given in the spring term of odd years.

Lt 9. ROMAN SATIRE.—Selections from Ennius, Lucilius, Varro, Horace, Persius, Juvenal, Petronius; original research. *Five hours a fortnight.* Given in the fall term of odd years. Open to students that have taken, or are taking, courses 5-6, or 7-8.

Lt 10. ROMAN SATIRE.—A continuation of course 9. *Five hours a fortnight.* Given in the spring term of even years.

Lt 11. ROMAN PHILOSOPHY.—Lucretius (selections); Cicero (selections from the Academica, De Officiis, Tusculanæ Disputationes, De Finibus, De Natura Deorum); Seneca (De Pro-

videntia, De Vita Beata); lectures on the history and development of ancient philosophy; original research. *Five hours a fortnight.* Given in the fall term of even years. Open to students that have taken, or are taking, courses 5-6, or 7-8.

Lt 12. ROMAN PHILOSOPHY.—A continuation of course 11. *Five hours a fortnight.* Given in the spring term of odd years.

Lt 13. ROMAN LITERATURE.—General introduction to the subject; illustrative class-room readings; a choice of one of five courses of collateral reading of Roman authors. *Five hours a fortnight.* Given in the fall term of even years. Open to students that have taken courses 1-4.

Lt 14. ROMAN LITERATURE.—A continuation of course 13. *Five hours a fortnight.* Given in the spring term of odd years.

Lt 15. ROMAN RHETORIC AND ORATORY.—Quintilian (selections from the Institutio Oratoria); Tacitus (Dialogus de Oratoribus); Cicero (selections from the Brutus, De Oratore, Orator); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. *Five hours a fortnight.* Given in the fall term of odd years. Open to students that have taken courses 1-4.

Lt 16. ROMAN RHETORIC AND ORATORY.—A continuation of course 15. *Five hours a fortnight.* Given in the spring term of even years.

Lt 17. ROMAN TOPOGRAPHY.—Lectures on the development of the city of Rome and the present condition of its ancient ruins, preceded by a glance at the geography of the Italian peninsula. Illustrated by maps, photographs, and stereopticon views. *One hour a week.* Given in the fall term of even years. Open to students that have taken courses 1-4.

Lt 18. ROMAN PRIVATE LIFE.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman everyday life. *One hour a week.* Given in the spring term of odd years. Open to students that have taken courses 1-4.

Lt 19. LATIN WRITING.—Exercises in the translation of English into Latin with special reference to style. *One hour a week.* Given in the fall term of odd years. Open to students that have taken courses 1-4.

Lt 20. ROMAN EPIGRAPHY.—The principles of the science, and the interpretation of selected inscriptions. *One hour a week.* Given in the spring term of even years. Open to students that have taken courses 1-4.

ROMANCE LANGUAGES

PROFESSOR LEWIS; MR. HARRY.

Rm 1. FRENCH.—Elementary course. Fraser and Squairs Elementary French Grammar; Super, French Reader; Mérimée, Colomba; Halévy, L'Abbé Constantin; About, Le Roi des Montagnes. *Four hours a week.* Fall term. MR. HARRY.

Rm 2. FRENCH.—The continuation of course 1. *Four hours a week.* Spring term. MR. HARRY.

Rm 2a. FRENCH.—For students that offer French at entrance. The equivalent of the first half of course 2. *Five hours a fortnight.* Fall term. MR. HARRY.

Rm 2b. FRENCH.—The continuation of course 2a. The equivalent of the last half of course 2. *Five hours a fortnight.* Spring term. MR. HARRY.

Rm 3a. FRENCH.—For students that have taken courses 1 and 2, or their equivalent. Intermediate course. Daudet, Contes; Augier, Le Gendre de Monsieur Poirier; Hugo, Hernani; Beaumarchais, de Mariage de Figaro; Crane, Le Romantisme Français. Review of grammatical principles. Fasnacht, French Composition. *Five hours a fortnight.* Fall term. MR. HARRY.

Rm 3b. FRENCH.—The continuation of course 3a. *Five hours a fortnight.* Spring term. MR. HARRY.

Rm 4a. FRENCH.—The Seventeenth Century. Corneille, Racine, Molière. Lectures, outside reading, themes. *Five hours a fortnight.* Fall term. MR. HARRY.

MOUNT VERNON HOUSE FROM THE CAMPUS

Rm 4b. FRENCH.—The continuation of course 4a. Spring term. MR. HARRY.

Rm 5a. FRENCH.—General survey of French literature. Lectures, recitations, themes in English and French; collateral reading. *Five hours a fortnight.* Fall term. PROFESSOR LEWIS; MR. HARRY.

Rm 5b. FRENCH.—The continuation of course 5a. The extended study of a particular epoch. *Five hours a fortnight.* Spring term. PROFESSOR LEWIS; MR. HARRY.

Rm 9a. SPANISH.—An elementary course, elective for those who have completed course 2. The text-books are: Edgren, Spanish Grammar; Matzke, Spanish Reader; Alarcón, El Capitán Veneno. *Five hours a fortnight.* Given in the fall term of even years. PROFESSOR LEWIS.

Rm 9b. SPANISH.—A continuation of course 9a. *Five hours a fortnight.* Given in the spring term of odd years. PROFESSOR LEWIS.

Rm 11a. ITALIAN.—An elementary course, elective for those who have completed course 2. The text-books are: Grandgent, Italian Grammar; Bowen, First Italian Readings. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR HUDDILSTON.

Rm 11b. ITALIAN.—A continuation of course 11a. The text-books are: Grandgent, Italian Composition; Goldoni, La Locandiera; De Amicis, Cuore; Manzoni, I Promessi Sposi. *Five hours a fortnight.* Given in the spring term of even years. PROFESSOR HUDDILSTON.

GERMAN

PROFESSOR LEWIS; MR. THOMPSON.

Gm 1. GERMAN.—Elementary course. Huss, German Reader; Harris, German Lessons; Storm, Immensee; Gerstäcker, Germelshausen; Fouqué, Undine. *Four hours a week.* Fall term. PROFESSOR LEWIS; MR. THOMPSON.

Gm 2. GERMAN.—The continuation of course 1. *Four hours a week.* Spring term. PROFESSOR LEWIS; MR. THOMPSON.

Gm 2a. GERMAN.—For students who offer German at entrance. The equivalent of the first half of course 2. *Five hours a fortnight.* Fall term. PROFESSOR LEWIS.

Gm 2b. GERMAN.—The continuation of course 2a. The equivalent of the last half of course 2. *Five hours a fortnight.* Spring term. PROFESSOR LEWIS.

Gm 3a. GERMAN.—For students that have taken courses 1 and 2, or their equivalent. Lessing, Minna von Barnhelm; Schiller, Wilhelm Tell; Wildenbruch, Harold; Brandt and Day's Scientific Readings. Review of grammatical principles; Harris, German composition. *Five hours a fortnight.* Fall term. PROFESSOR LEWIS.

Gm 3b. GERMAN.—The continuation of course 3a. *Five hours a fortnight.* Spring term. PROFESSOR LEWIS.

Gm 4a. GERMAN.—Schiller, Wallenstein; Goethe, Egmont; Lessing, Nathan der Weise; outside reading; themes. *Five hours a fortnight.* Fall term. PROFESSOR LEWIS.

Gm 4b. GERMAN.—Goethe, Faust, Part I. Lectures, themes, reference readings. *Five hours a fortnight.* Spring term. PROFESSOR LEWIS.

Gm 5a. GERMAN.—History of German literature. Kluge, Deutsche National Litteratur. Lectures, recitations, themes in English and German; collateral reading. *Five hours a fortnight.* Fall term. PROFESSOR LEWIS.

Gm 5b. GERMAN.—A continuation of the history of German literature. The extended study of a particular epoch. *Five hours a fortnight.* Spring term. PROFESSOR LEWIS.

ENGLISH

PROFESSOR ESTABROOKE; MR. THOMPSON.

Eh 1. DECLAMATIONS.—In the freshman year six declamations are required—three in the fall, and three in the spring. In the sophomore and junior years, five are required each year—three in the fall, and two in the spring. PROFESSOR ESTABROOKE; MR. THOMPSON.

Eh 2. THEMES.—In the sophomore year five themes, historical in subject, and each containing from 1,000 to 1,200 words, are required. In the junior year five themes are required, and in the senior year, two themes or debates. PROFESSOR ESTABROOKE; MR. THOMPSON.

Eh 3. RHETORIC.—The classification of sentences; analysis of the sentence with reference to punctuation, clearness, strength, and unity; exercises in punctuation; diction, with special reference to purity, propriety, and precision of language; the paragraph; themes, including the narrowing of the subject, construction of outline, etc.; frequent exercises in extemporaneous writing; formal essays.

The text-book is Genung's Outlines of Rhetoric. *Five hours a fortnight.* Fall term. PROFESSOR ESTABROOKE; MR. THOMPSON.

Eh 4. RHETORIC.—Extended study of narration and description, argumentative composition, and persuasion; construction of analytical outlines of selections from Burke, Webster, Macaulay, and others; practice in different kinds of composition; exercises in extemporaneous writing.

The text-book is A. S. Hill's Principles of Rhetoric. *Five hours a fortnight.* Spring term. PROFESSOR ESTABROOKE; MR. THOMPSON.

Eh 5. OLD ENGLISH.—Elements of Old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of Old English to modern English and modern German.

The text-book is Smith's Old English Grammar. *Five hours a fortnight.* Spring term. PROFESSOR LEWIS.

Eh 8. ENGLISH LITERATURE.—The text-book, Pancoast's Introduction to English Literature, is supplemented by frequent lectures, and by study in the library. A few masterpieces are studied in detail. Attention is given to historical and social conditions, and the students are required to prepare essays upon the characters and times studied. *Five hours a fortnight.* Fall term. PROFESSOR ESTABROOKE.

Eh 9. ENGLISH LITERATURE.—A continuation of course 8. *Five hours a fortnight.* Spring term. PROFESSOR ESTABROOKE.

Eh 10. ENGLISH LITERATURE.—In this course particular attention is paid to the development of the English novel and to the Lake poets. *Five hours a fortnight.* Fall term. PROFESSOR ESTABROOKE.

Eh 11. ENGLISH LITERATURE.—A continuation of course 10, including a study of the most important American authors of the present century. *Five hours a fortnight.* Spring term. PROFESSOR ESTABROOKE.

Eh 12. ENGLISH LITERATURE.—Readings from English fiction. In this course selections from English novelists (chiefly later ones) are read critically, in order to determine the characteristic qualities of each. At least one entire work of a selected author is carefully studied. *Five hours a fortnight.* Fall term. PROFESSOR ESTABROOKE.

Eh 13. ENGLISH LITERATURE.—A continuation of course 12. *Five hours a fortnight.* Spring term. PROFESSOR ESTABROOKE.

PHILOSOPHY

PROFESSOR FERNALD.

Pl 1. PSYCHOLOGY.—Among the topics considered are sensation, structure and functions of the brain, conditions of neural activity, consciousness, attention, conception, discrimination, association, memory, imagination, perception, reasoning, instinct, emotions and sentiments, will as volition, will as choice, and will in relation to character.

The text-book is James's Psychology (Briefer Course.) *Five hours a fortnight.* Fall term.

Pl 2. Logic.—The object of this course is to give the student a just appreciation of the functions of language as a means of expressing thought, and a familiarity with the principles of deductive and inductive reasoning. The student is given frequent drills in the application of logical principles.

The text-book is Ryland's Logic. *Five hours a fortnight.* Spring term.

Pl 3. History of Philosophy.—The text-book is Weber's History of Philosophy. *Five hours a fortnight.* Fall term of odd years.

Pl 4. Pedagogy.—The principles of psychology applied to the art of teaching. The order in which the several powers of the mind become active; their relative activity and development at successive school periods. The principles and methods of teaching; oral instruction and the study of books; the recitation, its objects and methods; methods of testing, by questions, by topics; examinations; psychical facts applied to moral training. *Five hours a fortnight.* Spring term.

Pl 5. Comparative Psychology. The psychology of man and the higher animals compared. A study of other minds than ours with reference to sense-experience, instinct and intelligence, association of ideas, memory, perception of relations, the power to reason, and the emotions. *Five hours a fortnight.* Offered in the spring term of even years. Open to juniors and seniors that have taken course 1.

Pl 6. Psychology, Advanced Course.—Besides special topics in general psychology, this course is designed to include a discussion of such phenomena as sleep and dreams, the hypnotic state, thought transference, illusions and hallucinations. *Five hours a fortnight.* Offered in the spring term of odd years. Open to juniors and seniors that have taken course 1.

Pl 8. Experimental Psychology.—This course deals with mental processes from the standpoint of experimental study, and seeks to develop the power of introspection of these processes by modern experimental methods. † *Two hours a week.* Spring term. Open to juniors and seniors that have taken course 1, to the limit of the psychological laboratory.

Pl 9. History of Education.—Educational systems, methods, theories, and practices of the ancient oriental and classical nations, as also of the nations and peoples of mediaeval and modern times. A comparison of the school systems of the more advanced nations, especially of those of Germany, France, England, and the United States. The history of education aims to develop, for present and future service, an educational science based on the clear and definite teachings of the past. *Five hours a fortnight.* Fall term. Open to juniors and seniors. Pl 9 precedes Pl 4 in the course in Pedagogy.

CIVICS AND HISTORY

Professor Rogers.

Cv 1. General History.—The text-book is Schwill's History of modern Europe. *Five hours a fortnight.* Fall term.

Cv 2. English History.—The text-book is Gardiner's A Student's History of England. *Five hours a fortnight.* Spring term.

Cv 3. American History.—Lectures, supplemented by topical investigation and study.

The text-book is Burgess's Middle Period. *Two hours a week.* Fall term.

Cv 4. The Philosophy of History.—The literature, learning, political and economic conditions of the great historic nations, and the growth of their institutions.

The text-book, Adams's European History, is supplemented by lectures and topical studies. *Five hours a fortnight.* Given in the fall term of even years.

Cv 11. International Law.—The text-book is Lawrence's International law. *Five hours a fortnight.* Given in the fall term of odd years.

Cv 12. Library Work.—The aim of this work is to familiarize the student with the literature of history and economics and to teach him to make critical and independent investigation of questions connected with these subjects. †*Five hours a fortnight.* Spring term.

Cv 13. Political Economy.—Instruction is given by lectures. Topical readings and investigations are required. *Five hours a fortnight.* Fall term.

Cv 14. Political Economy.—A continuation of course 13. *Five hours a fortnight.* Spring term.

Cv 15. Constitutional Law and History.—An outline of Anglo-Saxon institutions, the development of the English Constitution, the growth and political conditions of the American colonies, the Articles of Confederation, the adoption of the Constitution, and the comparative study of the Federal and the State Constitutions from the historical and legal standpoints.

The text-book is Rogers's Our System of Government. *Five hours a fortnight.* Fall term.

Cv 16. Constitutional Law and History.—A continuation of course 15. *Five hours a fortnight.* Spring term.

Cv 17. American History.—A continuation of course 3. *Two hours a week.* Spring term.

MATHEMATICS AND ASTRONOMY

Professor Hart; Mr. Siff; Mr. Packard.

Ms 1. Solid Geometry.—Solid and spherical geometry, including the mensuration of solids, and original demonstrations.

The text-book is Wells' Solid Geometry. *Five hours a fortnight.* Spring term. Professor Hart; Mr. Siff.

Ms 2. Algebra.—Review of quadratic equations, the binomial theorem, ratio and proportion, and the progressions; indeterminate equations; logarithms.

The text-book is Wells' College Algebra. *Two hours a week.* Fall term. Mr. Packard; Mr. Siff.

Ms 3. Algebra.—Convergence and divergence of series; undetermined coefficients; partial fractions; exponential and logarithmic series; permutations and combinations; probability; the theory of equations.

The text-book is Wells' College Algebra. *Five hours a fortnight.* Spring term. PROFESSOR HART; MR. PACKARD; MR. SIFF.

Ms 4. PLANE TRIGONOMETRY.—The text-book is Murray's Trigonometry. *Three hours a week.* Fall term. PROFESSOR HART; MR. SIFF; MR. PACKARD.

Ms 5. ANALYTICAL GEOMETRY.—A brief study of the point, right line, and conic sections.

The text-book is Wentworth's Analytic Geometry. *Five hours a fortnight.* Spring term. MR. PACKARD.

Ms 6. ANALYTICAL GEOMETRY.—A more extended course. The straight line conic sections, including polar and oblique coördinates; the equation of the second degree; introduction to solid analytical geometry.

The text-book is Tanner and Allen's Analytic Geometry. *Five hours a week.* Fall term. PROFESSOR HART; MR. SIFF; MR. PACKARD.

Ms 7. CALCULUS.—Differentiation; integration by fundamental formulas; definite integrals.

The text-book is Hall's Differential and Integral Calculus. *Five hours a week.* Spring term. MR. SIFF; MR. PACKARD.

Ms 8. CALCULUS.—Applications of differential calculus; applications of integral culculus.

The text-book is Hall's Differential and Integral Calculus. *Five hours a fortnight.* Fall term. PROFESSOR HART; MR. PACKARD.

Ms 9. DESCRIPTIVE ASTRONOMY. —The text-book is supplemented by informal lectures, and illustrated by lantern slides, the Trouvelot drawings of celestial objects, and work in the observatory.

The text-book is Comstock's Text-book of Astronomy. *Five hours a fortnight.* Fall term. MR. PACKARD.

Ms 10. PRACTICAL ASTRONOMY.—Problems in the conversion of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The instruments used

are the sextant, artificial horizon, portable chronometer, theodolite, and verticle circle. *Five hours a fortnight.* Spring term. PROFESSOR HART.

Ms 11. ADVANCED ALGEBRA.—Determinants and the solution of higher equations. *Five hours a fortnight.* Spring term. MR. PACKARD.

Ms 12. ADVANCED INTEGRAL CALCULUS.—A course based upon Byerly's Integral Calculus. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR HART.

Ms 13. ADVANCED INTEGRAL CALCULUS.—A continuation of course 12. *Five hours a fortnight.* Given in the spring term of even years. PROFESSOR HART.

Ms 15. DIFFERENTIAL EQUATIONS.—The text-book is Murray's Differential Equations. *Five hours a fortnight.* Given in the spring term of odd years. PROFESSOR HART.

Ms 16. PRACTICAL ASTRONOMY.—The theory and use of the sextant, universal instrument, transit, and equatorial. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR HART.

Ms 17. PRACTICAL ASTRONOMY.—A continuation of course 16. *Five hours a week.* Given in the spring term of even years. PROFESSOR HART.

Ms 19. SPHERICAL TRIGONOMETRY.—A continuation of course 4, with additional problems and applications to spherical astronomy. *Two hours a week.* Spring term. MR. SIFF; MR. PACKARD.

Ms 20. SOLID ANALYTICAL GEOMETRY.—Lectures based on C. Smith's Solid Geometry. *Five hours a fortnight.* Given in the fall term of even years. PROFESSOR HART.

PHYSICS

PROFESSOR STEVENS; MR. BURBANK; MR. POUCHER.

Ps 1. GENERAL PHYSICS.—Lectures on the dynamics of solids, liquids and gases; sound and light; experiments before the class; problems. *Five hours a week.* Fall term. PROFESSOR STEVENS; MR. BURBANK.

Open to students that have taken Ms 4.

Ps 2. GENERAL PHYSICS.—A continuation of course 1; heat and electricity. *Five hours a fortnight.* Spring term. PROFESSOR STEVENS; MR. BURBANK.

Ps 3. ELEMENTARY PHYSICS.—A non-mathematical course, covering the ground of course 1. The recitations are supplemented by lectures and experimental demonstrations.

The text-book is Dolbear's Natural Philosophy. *Five hours a fortnight.* Fall term. MR. POUCHER.

Ps 4. ELEMENTARY PHYSICS.—A continuation of course 3. *Two hours a week.* Spring term. MR. POUCHER.

Ps 5. LABORATORY PHYSICS.—The subjects usually included in an under-graduate course. Special attention is given to the reduction of observations, and the tabulation of results.

Nichols's Laboratory Manual is made the basis of most of the experiments. †*Five hours a week.* Spring term. PROFESSOR STEVENS; MR. BURBANK; MR. POUCHER.

Open to students that have taken either course 1 or course 12.

Ps 6. LABORATORY PHYSICS.—A brief course for students in the short course in pharmacy. †*Two hours a fortnight.* Spring term. MR. POUCHER.

Ps 7. ADVANCED OPTICS.—Lectures in continuation of course 1, based chiefly upon Preston's Light. *Five hours a fortnight.* Spring term. PROFESSOR STEVENS.

Open to students that have taken Ms 8.

Ps 8. Advanced Physics.—One course in advanced physics is offered each year. For this year the text-book is Nipher's Electricity and Magnetism. *Five hours a fortnight.* Fall term. Professor Stevens.

Open to students that have taken Ms 8.

Ps 9. Laboratory Physics.—General laboratory work in continuation of course 5. †*Five hours a week.* Fall term. Professor Stevens.

Ps 10. Laboratory Physics.—Advanced laboratory work in optics, in continuation of course 9. †*Five hours a week.* Spring term. Professor Stevens.

Ps 11. Electrical Measurement and Testing.—The measurement of resistance, potential, current and capacity; the testing of galvanometers, etc. The charge for this course is $2.50. †*Four hours a week.* Fall term. Mr. Burbank; Mr. Poucher.

Ps 12. General Physics.—A course covering the ground of course 1, with more attention to the experimental and historical aspects and less to the mathematical.

The text-book is Gage's Principles of Physics. *Five hours a fortnight.* Fall term. Mr. Burbank.

Ps 13. General Physics.— A continuation of course 12. *Five hours a fortnight.* Spring term. Mr. Burbank.

Ps 14. Electrical Measurement and Testing.—Additional work in the subjects offered in course 11, with lectures on the mathematical theory of electrical instruments. The charge for this course is $1.00. *One hour a week.* Fall term. Professor Stevens. †*Three hours a week.* Fall term. Mr. Burbank; Mr. Poucher.

Ps 15. Laboratory Physics.—A special course, open to students that have completed courses 9, 10 and 11. Some subject is assigned for original investigation, or the work of a published research is repeated. †*Five hours a week.* Fall term. Professor Stevens.

Ps 16. LABORATORY PHYSICS.—A continuation of course 15. †*Five hours a week.* Spring term. PROFESSOR STEVENS.

Ps 17. ELECTROCHEMISTRY.—A lecture course on the modern theory of electrolysis and some of its practical applications. Attention will be given to the theory of battery cells, to the application of electrolysis in mining and purification of metals, and other commercial applications.

Lectures supplemented by references. *Five hours a fortnight.* Spring term. MR. BURBANK.

Open to students that have taken courses 2 and 5, and Ch 2.

CHEMISTRY

PROFESSOR AUBERT; DR. BOGGS; MR. MITCHELL.

Ch 1. GENERAL CHEMISTRY.—Recitations and lectures on the general principles of chemistry, illustrated by charts, experiments, etc.

The text-book is Remsen's Inorganic Chemistry. *Five hours a fortnight.* Fall term. DR. BOGGS.

Ch 2. GENERAL CHEMISTRY.—A continuation of course 1. *Five hours a fortnight.* Spring term. DR. BOGGS.

Ch 3. LABORATORY CHEMISTRY.—The preparation of the more common elements and inorganic compounds, and the study of their properties.

The text-book is Remsen and Randall's Chemical Experiments. † *Two hours a week.* Fall term. MR. MITCHELL.

Ch 4. LABORATORY CHEMISTRY.—Elementary qualitative analysis.

The text-book is Roger's Qualitative Analysis. †*Two hours a week.* Spring term. MR. MITCHELL.

Ch 5. INORGANIC CHEMISTRY.—Lectures and recitations, illustrated by specimens.

The text-book is Newth's Text-book of Chemistry. *Five hours a fortnight.* Fall term. PROFESSOR AUBERT; MR. MITCHELL.

Ch 6. INORGANIC CHEMISTRY.—A continuation of course 5. *Five hours a fortnight.* Spring term. PROFESSOR AUBERT; MR. MITCHELL.

Ch 7. ORGANIC CHEMISTRY.—The marsh gas series. Lectures and recitations, illustrated by specimens.

The text-book is Remsen's Organic Chemistry. *Five hours a fortnight.* Fall term. PROFESSOR AUBERT; MR. MITCHELL.

Ch 8. ORGANIC CHEMISTRY.—The unsaturated compounds and the benzene series.

The text-book is Remsen's Organic Chemistry. *Five hours a fortnight.* Spring term. PROFESSOR AUBERT; MR. MITCHELL.

Ch 10. ANALYTIC METHODS.—Discussion of gravimetric and volumetric methods.

The text-books are Appleton's Quantitative Analysis and Clowes and Coleman's Quantitative Analysis. *One hour a week.* Fall term. PROFESSOR AUBERT.

Open to students that have taken course 16.

Ch 11. ORGANIC CHEMISTRY.—The text-book is De Coninck's Cours de Chimie Organique. *Five hours a fortnight.* Spring term. PROFESSOR AUBERT.

Ch 12. ORGANIC CHEMICALS.—The preparation and purification of typical organic substances.

The text-book is Aubert's Organic and Inorganic Preparations. †*Five hours a week.* Fall term. PROFESSOR AUBERT.

Ch 13. DESCRIPTIVE MINERALOGY.—The text-book is Moses and Parsons's Elements of Mineralogy. †*Two hours a week.* Spring term. PROFESSOR JACKMAN.

Ch 14. QUALITATIVE ANALYSIS.—A study of qualitative analytical methods and reactions with a view to a clear understanding of the properties of the most important metals, non-metals and acids. The laboratory work is supplemented by recitations and reviews.

For students in the Chemical course the text is A. A. Noyes's Qualitative Analysis. For others the text will be suited to the nature of the course. *The time varies: it is stated in the tables.* DR. BOGGS.

Course 5 must be taken in connection with course 14, except by students in the Short Pharmacy Course, and those specially excused.

Ch 15. A continuation of Ch 14. with application of methods to the determination of unknown substances of increasing complexity. Some of the more unusual methods are studied, using the larger text-books in the library for reference.

The time varies: it is stated in the tables. DR. BOGGS.

Course 6 must be taken in connection with course 15, except by students in the Short Pharmacy Course, and those specially excused.

Ch 16.—QUANTITATIVE ANALYSIS.—Gravimetric determinations.

The text-book is Appleton's Quantitative Analysis. *The time varies; it is stated in the tables.* PROFESSOR AUBERT; MR. MITCHELL.

Ch 18. QUANTITATIVE ANALYSIS.—Analysis of complex alloys, minerals, etc.

The text-book is Clowes and Coleman's Quantitative Analysis. *The time varies; it is stated in the tables.* Fall term. PROFESSOR AUBERT.

Ch 19. VOLUMETRIC ANALYSIS AND ASSAYING.—Acidimetry, alkalimetry, oxydimetry; gold and silver assaying.

The text-book is Clowes and Coleman's Quantitative Analysis. *The time varies; it is stated in the tables.* PROFESSOR AUBERT.

Ch 20. AGRICULTURAL ANALYSIS.—The analysis of fodders, fertilizers, milk, and other agricultural products. The methods are those recommended by the Association of Official Agricultural Chemists. *The time varies; it is stated in the tables.* PROFESSOR AUBERT.

Ch 21. TOXICOLOGY AND URINALYSIS.—The determination of the commoner poisons; the analysis of urine.

The text-book is Aubert's Urinalysis and Toxicology. *The time varies; it is stated in the tables.* PROFESSOR AUBERT.

Ch 22. THESIS WORK.—The thesis must embody the results of original work in analysis, or research. † *Fifteen hours a week for eleven weeks.* Spring term. PROFESSOR AUBERT.

Ch 23. ORGANIC CHEMISTRY.—A continuation of course 8. *Five hours a fortnight.* Fall term. PROFESSOR AUBERT.

Ch 24. INDUSTRIAL CHEMISTRY.—General processes of technical chemistry, and selected subjects including the principal manufactured products of special interest. Lectures and recitations. The text-book is Thorp's Outlines of Industrial Chemistry. *Five hours a fortnight.* Spring term. PROFESSOR AUBERT.

Open to students that have taken course 8.

Ch 25. TECHNICAL ANALYSIS.—The analysis of ores and industrial products. †*Five hours a week.* Fall term. PROFESSOR AUBERT.

Ch 26. PHYSICAL CHEMICAL METHODS.—The determination of molecular weight by the vapor density, boiling point, and freezing point methods. The use of the refractometer and the polariscope. †*Five hours a week.* Spring term. PROFESSOR AUBERT.

Ch 27. LABORATORY PHYSIOLOGICAL CHEMISTRY.—Qualitative tests of fats, carbohydrates, protein, blood, milk, etc.

The text-book is Novy's Physiological Chemistry. †*Ten hours a week for nine weeks.* Fall term. PROFESSOR JACKMAN.

Ch 28. DYEING.—The practical application of dyes to cotton, wool, and silk. †*Fifteen hours a week for two weeks.* Spring term. PROFESSOR AUBERT.

BIOLOGY

PROFESSOR DREW; MR. BRITCHER; MR. CARY.

Bl 1. GENERAL BIOLOGY.—Students study in the laboratory, and where possible in the field, plants and animals selected to illustrate some of the simpler principles of biology. The general truths learned in the laboratory are emphasized and arranged by recitations and lectures. This course serves as a preparation for more advanced work in zoology, botany and physiology, and

affords the general student an opportunity to gain some knowledge of the subject. It is to be taken in connection with course 2. *Five hours a fortnight.* Fall term.

Bl 2. LABORATORY BIOLOGY.—To be taken in connection with course 1. †*Five hours a week.* Fall term.

Bl 3. CRYPTOGAMIC BOTANY.—Type forms of flowerless plants are studied in the laboratory and field. Attention is given to their economic importance, structure and life histories. This course is to be taken in connection with course 4. Course 1 is required as a preparation. *Five hours a fortnight.* Given in the fall term of odd years.

Bl 4. LABORATORY BOTANY.—To be taken in connection with course 3. †*Two hours a week.* Given in the fall term of odd years.

Bl 5. ZOOLOGY (Invertebrate animals).—The habits, comparative anatomy and classification of invertebrate animals are studied in the laboratory, class-room and field. This course is to be taken in connection with course 6. It is not complete in itself, but should be followed by course 7. Course 1 is required as a preparation. *Five hours a fortnight.* Fall term.

Bl 6. LABORATORY ZOOLOGY.—To be taken in connection with course 5. †*Five hours a week.* Fall term.

Bl 7. ZOOLOGY (Vertebrate animals).—A continuation of course 5. Types of vertebrate animals are studied and their structures compared. It is to be taken in connection with course 8. This course is not complete in itself. It should be preceded by course 5. Course 1 is required as a preparation. *Five hours a fortnight.* Spring term.

Bl 8. LABORATORY ZOOLOGY.—To be taken in connection with course 7. †*Five hours a week.* Spring term.

Bl 9. PHYSIOLOGY.—A study of the physiological activities of the animal body, with a laboratory basis of dissections, microscopic anatomy, and simple experiments. This course is to be taken in connection with course 10. Course 1 is required as a preparation. *Five hours a fortnight.* Spring term.

Bl 10. Laboratory Physiology.—To be taken in connection with course 9. †*Five hours a week.* Spring term.

Bl 11. Entomology.—The classification and structure of insects are studied in the laboratory, and observations on life-histories and economic importance are made in the field.

There are lectures and recitations at intervals during the term. This course is to be taken in connection with course 12. Course 1 is required as a preparation. *Five hours a fortnight.* Given in the fall term of even years.

Bl 12. Laboratory Entomology.—To be taken in connection with course 11. †*Two hours a week.* Given in the fall term of even years.

Bl 13. Geology.—A study of the structure and history of the earth, and the processes by means of which geological changes are brought about. *Five hours a fortnight.* Fall term.

Bl 14. Advanced Zoology or Botany.—Students who desire to continue the study of zoology or botany are supplied with modern apparatus, and instructed in modern methods of research. In general each student electing this work is given a problem and encouraged to devise means for its solution. *The time varies and may continue for one or more terms.*

AGRICULTURE

Professor Woods; Professor Gowell; Professor Merrill; Professor Russell.

Ag 1. Biological Chemistry.—Lectures and recitations on the chemical changes in nature important to agriculture; the composition of air, soils, natural waters, and plants; the sources and assimilation of plant food, and the chemical processes and methods of investigation by which these subjects are studied.

The text-book is Johnson's How Crops Grow. *Five hours a fortnight.* Fall term. Professor Merrill.

Ag 2. Biological Chemistry.—A continuation of course 1. Lectures and recitations in physiological chemistry, including

the composition of the animal body, and of food materials; the chemical changes involved in the digestion and assimilation of food; the chemistry of milk and dairy products, and the chemical processes and methods of investigation by which these subjects are studied.

The text-book is Arthus's Chimie Physiologique. *Five hours a week.* Spring term. PROFESSOR MERRILL.

Ag 3. AGRICULTURAL CHEMISTRY.—Lectures on the origin, composition, preparation and use of commercial fertilizers; the supply, composition, care and use of farm manures, and the general considerations which pertain to the maintenance of soil fertility. *Five hours a fortnight for nine weeks.* Given in the spring term of even years. PROFESSOR WOODS.

Ag 4. AGRICULTURAL PHYSICS.—Lectures on the relation of soils to heat and moisture; the mechanical condition of soils best suited to plant growth, and the objects to be gained by cultivation. *Five hours a fortnight for nine weeks.* Given in the spring term of odd years. PROFESSOR WOODS.

Ag 5. AGRICULTURAL ENGINEERING.—Lectures on farm drainage, irrigation, water supply for stock and household, farm implements and machinery, handling crops, construction of farm buildings, sites, etc. *Five hours a fortnight for nine weeks.* Given in the spring term of even years. PROFESSOR GOWELL.

Ag 6. STOCK FEEDING.—Lectures upon the production of cattle foods and their composition; formulating rations for milk and meat production; the application of the lectures to the animals in the herd.

The text-book is Jordan's Feeding of Animals. *Five hours a week for seven weeks.* Given in the spring term of odd years. PROFESSOR GOWELL.

Ag 7. DAIRYING.—Lectures upon the formation and composition of milk; sources of infection; bacteria and their relation to dairying; ferments and their effects.

The text-books are Grotenfelt and Woll's Principles of Modern Dairy Practice, and Wing's Milk and its Products. *Five hours a fortnight for nine weeks.* Given in the spring term of even years. PROFESSOR GOWELL.

Ag 8. STOCK BREEDING.—Lectures on animal reproduction, the principles of breeding, and the means of improvement and development. Practice is given in judging animals by a scale of points.

The text-books are Miles's Cattle Breeding, and Saunder's Horse Breeding. *Five hours a week for seven weeks.* Given in the spring term of odd years. PROFESSOR GOWELL.

Ag 9. POULTRY INDUSTRY.—Lectures, with practice in handling poultry; judging by a scale of points; breeding; hatching by natural and artificial processes; the use of machinery; caponizing; the construction and arrangement of buildings. *Five hours a week for four weeks.* Given in the spring term of odd years. PROFESSOR GOWELL.

Ag 10. DAIRY PRACTICE.—The treatment and handling of milk and cream; milk testing for fat and other solids; aëration, pasteurization and sterilization; the application of acid tests and ferments to butter and cheese making; operating and caring for dairy machinery; making, curing and judging butter and cheese; the business management of factories and creameries. Each student is required to provide two suits of clothes made of white drilling. †*Seven hours a week for twelve weeks.* Given in the spring term of even years. PROFESSOR GOWELL.

Ag 11. VETERINARY SCIENCE.—Lectures, demonstrations and clinics, illustrated by models, natural preparations, and living animals. *Five hours a fortnight.* Given in the spring term of even years. PROFESSOR RUSSELL.

Ag 12. DISSECTING.—A brief course intended to make the student familiar with the location and appearance of the more important organs of the animal body. †*Seven hours a week for six weeks.* Given in the spring term of odd years. PROFESSOR RUSSELL.

Ag 13. BACTERIOLOGY.—An elementary laboratory course, including the preparation of culture media and a critical study of the morphological and biological characteristics of a few typical bacteria. †*Ten hours a week for four and a half weeks.* Spring term. PROFESSOR RUSSELL.

Ag 14. ANIMAL HISTOLOGY.—Dissecting and the preparation of the most important tissues and organs. †*Ten hours a week for nine weeks.* Spring term. PROFESSOR RUSSELL.

Ag 15. LABORATORY BACTERIOLOGY.—An advanced course. †*Ten hours a week for nine weeks.* Spring term. PROFESSOR RUSSELL.

HORTICULTURE

PROFESSOR MUNSON; MR. CUMMINGS.

Ht 1. GENERAL BOTANY.—The structure and functions of the organs of plants; the development and relationship of the leading groups. Lectures supplemented by work in the laboratory, greenhouses, and field.

Gray's School and Field Book of Botany is used for reference. †*Five hours a week.* Spring term. PROFESSOR MUNSON; MR. CUMMINGS.

Ht 2. POMOLOGY.—The principles and practice of fruit growing. A discussion of the distribution, economic importance, methods of culture and marketing of fruits, and protection from insect and fungous enemies. *Five hours a fortnight for nine weeks.* Given in the fall term of even years. PROFESSOR MUNSON.

Ht 3. VEGETABLE GARDENING.—The history and uses of leading garden vegetables, with directions for their culture in the field and under glass. Lectures. *Five hours a fortnight for nine weeks.* Given in the fall term of even years. PROFESSOR MUNSON.

Ht 4. PLANT VARIATION.—A discussion of the underlying principles of horticulture. The origin and distribution of cultivated plants; their variation as affected by soil, climate, and cultivation; the methods and effects of crossing; the principles of selection, and the influence of heredity. *Five hours a fortnight for nine weeks.* Given in the fall term of odd years. PROFESSOR MUNSON.

Open to students that have taken course 1.

Ht 5. LANDSCAPE GARDENING.—The principles of landscape art and their application. *Five hours a fortnight for nine weeks.* Given in the fall term of odd years. PROFESSOR MUNSON.

Ht 6. LABORATORY HORTICULTURE.—Practical work in orchard, garden, and greenhouse, supplementing courses 2 and 3. †*Five hours a week.* Given in the fall term of even years. PROFESSOR MUNSON.

Ht 7. LABORATORY HORTICULTURE.—Practical work in the laboratory, the nursery, and on the campus, supplementing courses 4 and 5. †*Four hours a week.* Given in the fall term of odd years. PROFESSOR MUNSON.

Ht 8. HISTOLOGY OF PLANTS.—A description and comparison of tissues, with investigation of the minute anatomy of vegetable organs, and studies in the phenomena of cell development and fertilization.

Gregory's Plant Anatomy is used for reference. †*Five hours a week for nine weeks.* Spring term. PROFESSOR MUNSON.

Open to students that have taken course 1.

Ht 9. PLANT BREEDING.—A systematic study of the amelioration of plants by cultivation. Lectures and investigations concerning: the fact and philosophy of variation, the causes of individual differences, the choice and fixation of varieties; the philosophy of the crossing of plants, the limits of crossing, the function of a cross; how domestic varieties originate, the influence of heredity, the principles of selection.

Bailey's Plant Breeding, Darwin's Animals and Plants under Domestication, and Darwin's Cross and Self Fertilization in the Vegetable Kingdom, are used for reference. *Five hours a fortnight.* Given in the fall term of odd years. PROFESSOR MUNSON.

Open to students that have taken courses 1 and 4.

Ht 10. FORESTRY.—Importance and scope of the subject; meteorological influences; financial considerations; the propagation of trees and the planting of forests; forest management; forest products; forest fires, their prevention and control; enemies and diseases. Lectures. *Five hours a fortnight.* Given in the fall term of even years. PROFESSOR MUNSON.

CIVIL ENGINEERING

PROFESSOR GROVER; MR. BOARDMAN.

Ce 1. PLANE SURVEYING.—Recitations on the general principles of land surveying, the laying out of land, the dividing of land, surveying of public lands, direct leveling, and the variation of the magnetic needle.

The text-book is Raymond's Surveying. *Five hours a fortnight.* Spring term. MR. BOARDMAN.

Ce 2. FIELD WORK IN SURVEYING.—The use of the chain, compass, transit, and level. Instruments are adjusted, original surveys made, and old lines retraced. Plats are prepared of the surveys made in the field. The text-book is Field Manual by Pence and Ketchum. †*Four hours a week.* Spring term. MR. BOARDMAN.

Ce 3. RAILROAD ENGINEERING.—Lectures and recitations on the theory of railroad curves, switches, turnouts and slope stakes; the calculation of earthworks, and the resistance to trains offered by grades and curves; the theory of economic location.

The text-book is Allen's Railroad Curves and Earthwork. *Five hours a fortnight.* Fall term. MR. BOARDMAN.

Ce 4. RAILROAD WORK.—The location and detailed survey of a railroad several miles long. The curves are laid out, levels taken, and all the necessary measurements made to enable the student to compute the excavations and embankments and estimate the cost of construction. †*Five hours a week.* Fall term. MR. BOARDMAN.

Ce 5. HIGHWAY ENGINEERING.—The location, construction, and improvement of country roads under different conditions of soil, climate, and traffic. *One hour a week.* Fall term. PROFESSOR GROVER.

Ce 6. MECHANICS.—The principles of statics; the algebraic and graphic solution of statical problems, including simple trusses; exercises in finding the moment of inertia, center of gravity; the principles of dynamics, shearing force and bending moment. *Five hours a week.* Fall term. MR. VOSE.

Ce 7. MECHANICS.—A continuation of course 6. *Five hours a week.* Spring term. MR. VOSE.

Ce 8. SANITARY ENGINEERING.—Drainage of land; plumbing of houses; drainage and sewerage of towns; sewage disposal; water supply and purification; ventilation of houses.

The text-book is Folwell's Sewerage. *Five hours a fortnight.* Fall term. PROFESSOR GROVER.

Ce 9. HIGHER SURVEYING.—The plane table, stadia measurements, topographical surveying, the elements of geodesy, the measurement of base lines, calculation of a system of triangulation. †*Twelve hours a week for eight weeks.* Spring term. PROFESSOR GROVER.

Ce 10. HYDRAULICS.—The weight, pressure and motion of water; the flow of water through orifices and pipes; weir gauging; the flow of water in open channels, mains, and distribution pipes; distribution systems, the construction of water works for towns and cities.

The text-book is Merriman's Hydraulics. *Five hours a fortnight.* Spring term. PROFESSOR GROVER.

Ce 11. HYDRAULICS FIELD WORK.—The measurement of the flow of rivers is illustrated by the application of the current meter and the various forms of floats to the Penobscot river or some of its large branches. †*Seven hours a week for six weeks.* Fall term. PROFESSOR GROVER.

Ce 12. STRUCTURES.—A detailed study of the properties of materials used in engineering structures; their resistance to bending, breaking, extension and compression, under the various conditions of practice; the theory of stresses in framed structures; the usual systems of loading; the principles of designing. *Five hours a week.* Fall term. PROFESSOR GROVER.

Ce 13. STRUCTURES.—A continuation of course 12; including the study of problems in connection with masonry structures; natural and artificial foundations; the stability of dams and retaining walls; the designing of bridge piers and abutments; the theory of the masonry arch. *Five hours a week.* Spring term. PROFESSOR GROVER.

Ce 14. DESIGNING.—Designs for several of the common types of wooden and steel structures, and preparation of drawings for the shop. †*Seven hours a week for twelve weeks.* Fall term. MR. BOARDMAN.

Ce 15. DESIGNING AND THESIS WORK.—A continuation of course 14 and the preparation of a thesis. †*Twelve hours a week.* Spring term. PROFESSOR GROVER; MR. BOARDMAN.

Ce 16. HYDRAULIC ENGINEERING.—Rainfall, evaporation, and stream-flow; the collection, purification, and distribution of water for city supplies; water meters, water wheels and motors; the development and utilization of water power. *Five hours a fortnight.* Fall term. PROFESSOR GROVER.

Ce 17. HYDRAULIC ENGINEERING.—A continuation of course 16. *Five hours a fortnight.* Spring term. PROFESSOR GROVER.

Ce 18. SANITARY SCIENCE.—Lectures on the causes and prevention of disease, sanitation and the public health, and the relations of the engineer to this work. *One hour a week.* Fall term. PROFESSOR GROVER.

MECHANICAL ENGINEERING

PROFESSOR FLINT; MR. VOSE; MR. STEWARD.

Me 1. CARPENTRY.—The care and sharpening of tools, the squaring of stock, and taking work out of wind; practice in making different joints in soft and hard wood; wood turning. The charge for material is $4.00 a term. †*Seven hours a week for twelve weeks.* Fall term. MR. VOSE.

Me 2. FORGE WORK.—Drawing and upsetting; welding; making rings, chain links, eye bolts, bolt heads, etc.; the making of a steel punch, cold chisels, and a set of lathe tools, for use in the machine shop; foundry work. The student must furnish a forging hammer, calipers, and scale, at a cost of $2.50. The charge for materials is $5.00 a term. †*Five hours a week.* Spring term. MR. STEWARD.

Me 3. KINEMATICS.—Methods of transmitting and transforming motion, illustrated by the solution of practical problems; study of forms of gearing, cone pulleys, etc.; construction of cams, lobed wheels, and gear teeth.

The text-book is Jones's Kinematics. † *Five hours a week.* Spring term. MR. VOSE.

Me 4. MACHINE WORK.—Exercises in filing and chipping; lathe work, drilling, boring and threading in the lathe; making cut gears, machinist taps, and finished bolts; exercises on the planer and shaper. Each student provides himself with center gauge, steel scale, and files, at a cost of $2 50. The charge for materials is $5.00 a term. Students will be given credit for work in commercial shops on presentation of satisfactory proof. *The time devoted to machine work varies.* MR. STEWARD.

Me 8. STRUCTURES.—A continuation of Ce 7, with applications to framed structures; graphic methods of analyzing roof and bridge trusses, and the stability of walls. Merriman's Mechanics of Materials, and Merriman's Roofs and Bridges are used for reference. *Five hours a fortnight.* Fall term. MR. VOSE.

Me 9. MACHINE DESIGN.—The principles of machine construction, treated by means of text-books, lectures, and a study of methods in modern practice; the preparation of working drawings, and the sketching of original designs of simple machine parts.

The text-book is Jones's Machine Design, Part II. † *Seven hours a fortnight.* Spring term. MR. VOSE.

Me 10. HYDRO-MECHANICS.—The behavior of liquids in motion and under pressure, flowing through pipes and in open channels, with problems.

The text-book is Bowser's Hydro-Mechanics. *Five hours a fortnight.* Fall term. PROFESSOR FLINT.

Me 11. HEAT AND STEAM.—The characteristics of steam and its behavior in pipes, boilers, and particularly in the cylinders

of engines; problems involving the properties of saturated steam; the calculation of steam pipes and safety valves; the design of a boiler suited to run an engine under given conditions, and the detail drawings.

The text-book is Benjamin's Heat and Steam. *Five hours a fortnight.* Fall term. PROFESSOR FLINT.

Me 12. STEAM BOILER DESIGN.—Drawings of the more important parts of the design worked out in course 11. †*Twelve hours a week.* Fall term. PROFESSOR FLINT.

Me 13. TESTING.—Tests of steam gauges, boilers, etc.; tests of different metals under tension and compression. *Five hours a fortnight.* Spring term. PROFESSOR FLINT.

Me 14. STEAM ENGINE.—The steam engine as a source of power; the design, proportions and working of engine cylinders, steam pipes, and ports; engine valves, eccentrics, adjustable eccentrics; the locomotive link motion with its connections; problems on the slide valve and link motion; the calculation of details of an engine.

The text-book is Auchincloss's Link and Valve Motion. *Seven hours a fortnight.* Spring term. PROFESSOR FLINT.

Me 15. STEAM ENGINE DESIGN.—Drawings of the parts worked out in course 14; the setting of valves by means of the indicator, the calculation of horse power; the consumption of water and coal, etc. †*Fifteen hours a week for nine weeks.* Spring term. PROFESSOR FLINT.

Me 16. THESIS WORK.—The design of a piece of machinery, or of some piece of scientific apparatus, or, an original investigation of some engineering problem to be fully written up and presented to the department. †*Fifteen hours a week for nine weeks.* Spring term. PROFESSOR FLINT.

Me 19. MACHINE DRAWING.—Practice in tracing completed drawings, and in making drawings of standard bolts, threads, and simple machine parts, from actual dimensions. Special attention is given to the care and handling of instruments, lettering, and methods of projection.

† *Seven hours a week for six weeks.* Fall term. MR. VOSE.

ELECTRICAL ENGINEERING

PROFESSOR WEBB; MR. DAVIS.

Ee 1. ELECTRICITY AND MAGNETISM.—This course continues the subject of electricity and magnetism begun in physics. The work is taken up by text-book, lectures and problems.

The text-book is Silvanus Thompson's Electricity and Magnetism. *Five hours a fortnight.* Fall term. Required of juniors in Electrical Engineering. MR. DAVIS.

Ee 2. ELECTRICITY AND MAGNETISM AND DYNAMO DESIGN.—A continuation of course 1, with the application of principles to the problems of dynamo design. The work is taken up by text-book, lectures and problems.

The text-book is Hawkins and Wallis's The Dynamo. *Five hours a fortnight.* Spring term. Required of juniors in Electrical Engineering. MR. DAVIS.

Ee 3. ELECTRICAL MACHINERY.—A course on the design and construction of direct current generators and motors. The work is taken by lectures and problems. *Five hours a fortnight.* Fall term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 4. ALTERNATING CURRENT MACHINERY.—In this course are considered the principles involved in the design, construction and operation of alternating current generators, motors, transformers and rotary converters.

The text-book is Jackson's Alternating Currents and Alternating Current Machinery. *Five hours a week for nine weeks.* Spring term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 5. DESIGN OF DIRECT CURRENT MACHINES.—This course is taken up in the drawing room. Each student is required to make the calculations and drawings of a direct current dynamo. † *Five hours a week.* Fall term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 6. DESIGN OF ALTERNATING CURRENT MACHINES.—A drawing room course similar to course 5. The calculations and drawings are made for an alternating current generator. †*Five hours a week for nine weeks.* First half spring term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 7. LABORATORY WORK, DIRECT CURRENTS.—Tests of electrical instruments. Experimental work with generators and motors. Power and photometric tests of electric lamps. Care and management of the college lighting plant. The charge for this course is $5. † *Seven hours a week.* Fall term. Required of seniors in Electrical Engineering. MR. DAVIS.

Ee 8. LABORATORY WORK, ALTERNATING CURRENTS.—A course similar to course 7. Tests of alternating current instruments. Experimental work with generators, motors, transformers and rotary converters. † *Five hours a week for nine weeks.* First half of spring term. The charge for this course is $2.50. Required of seniors in Electrical Engineering. MR. DAVIS.

Ee 9. DYNAMOS.—The general principles and theory of design. Different types of machines. Practical considerations in the construction and operation of direct current generators and motors. Connecting and starting up of generators and motors. Illustrations by laboratory experiments.

The text-book is Crocker's Electric Lighting. *Two hours a week.* Fall term. Required of juniors in Mechanical Engineering. MR. DAVIS.

Ee 10. DYNAMO LABORATORY WORK.—Practice in the connecting and running of direct current generators and motors. Tests for regulation, heating, efficiency and insulation. † *Five hours a week for nine weeks.* First half of spring term. Required of seniors in Mechanical Engineering. The charge for this course is $2.50. MR. DAVIS.

Ee 13. ALTERNATING CURRENTS.—Theory of alternating currents. The text-book is Jackson's Alternating Currents and Alternating Current Machinery. *Five hours a fortnight.* Fall term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 14. ELECTRICAL ENGINEERING.—Polyphase alternating currents and wiring. Theory and construction of telegraph and telephone instruments. Methods of operating and testing. The course is taken by lectures. *Five hours a fortnight for nine weeks.* Last half of spring term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 16. THESIS WORK.—The designing of electrical apparatus, laboratory investigation, or commercial testing, with results presented in proper form. † *Fifteen hours a week for nine weeks.* Last half of spring term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

DRAWING

PROFESSOR GROVER; MR. BOARDMAN; MR. COLE.

Dr 1. DRAWING.—Free-hand work in perspective and model drawing; lettering.

† *Five hours a week.* Fall term. MR. COLE.

Dr 2. MATHEMATICAL DRAWING.—The plotting of functions, and the solution of equations by the graphic method.

The text-book is Harris and Hart's Lessons in Mathematical Drawing. † *Three hours a week for thirteen weeks.* Fall and spring terms. MR. COLE.

Dr 3. MECHANICAL DRAWING.—Instruction and practice in the care and use of drawing instruments, in the drawing of geometrical problems, and in the use of water colors. The text-book is Cole's Notes on Mechanical Drawing.

† *Five hours a week.* Spring term. MR. COLE.

Dr 4. MECHANICAL DRAWING.—Problems in shades and shadows, and dimension drawing.

† *Five hours a week.* Fall term. MR. COLE.

Dr 5. GENERAL DRAWING.—Isometric and cabinet projections, perspective, and the preparation of working drawings. Lectures and exercises in the drawing room.

† *Twelve hours a week for five weeks.* Spring term. MR. COLE.

Dr 6. DESCRIPTIVE GEOMETRY.—Elementary problems; tangents, intersection of planes, cylinders, cones, spheres, etc. The time is divided equally between the recitation room and drawing room.

The text-book is Church's Descriptive Geometry. *Five hours a fortnight.* Fall term. MR. BOARDMAN; MR. COLE.

Dr 7. DESCRIPTIVE GEOMETRY.—A continuation of course 6. *Three hours a fortnight.* Spring term. MR. BOARDMAN; MR. COLE.

Dr 8. STEREOTOMY.—The application of the methods of descriptive geometry to the preparation of drawings for arches, retaining walls, bridge abutments, piers, etc.

† *Twelve hours a week for five weeks.* Spring term. MR. COLE.

PHARMACY

PROFESSOR JACKMAN.

Pm 1. ELEMENTARY PHARMACY.—The history of pharmacopœias, dispensatories, etc.; weights and measures, specific gravity, the pharmaceutical uses of heat, distillation, solution, filtration, etc.; official preparations; pharmaceutical problems, involving percentage solutions, parts by weight and measure, chemical principles and equations, actual pharmacy operations.

The text-book is Caspari's Pharmacy. *Five hours a week.* Fall term.

Pm 2. GALENICAL PHARMACY.—The chemical elements, official salts, and inorganic acids, their preparation and classification; organic compounds, their classification, official preparations; official drugs of the materia medica, their preparations, animal preparations; extemporaneous pharmacy, the principles of dispensing, store management, etc.

The text-book is Caspari's Pharmacy. *Five hours a week.* Fall term.

Pm 3. LABORATORY PHARMACY.—Official preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups, tinc-

tures, and other galenicals; official tests of chemicals, drugs, and preparations, of identity, strength and adulteration; drug assaying.

The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. †*Twelve hours a week.* Fall term.

Pm 4. PHARMACOPŒIA.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in tests and preparations.

The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. *Five hours a week.* Spring term.

Pm 5. INORGANIC PHARMACOGNOSY.—Nomenclature; practical exercises in the identification of specimens.

The text-book is the U. S. Pharmacopœia. *Five hours a fortnight.* Fall term.

Pm 6. ORGANIC PHARMACOGNOSY.—Nomenclature; habitat, etc.; practical exercises.

The text-books are the U. S. Pharmacopœia and Maisch's Materia Medica. *Four hours a week.* Spring term.

Pm 7. MATERIA MEDICA.—Chemicals and drugs, their nature, uses, classification, therapeutic action, and doses; poisons, and antidotes.

The text-book is Potter's Materia Medica. *Five hours a fortnight.* Fall term.

Pm 8. THESIS WORK.—The thesis must embody the results of original work in analysis, or research. †*Twelve hours a week for nine weeks.* Spring term.

Pm 9. PHARMACY READINGS.—Current pharmacy literature; research and reference readings; abstracting; reports. †*Five hours a week.* Spring term.

Pm 10. LABORATORY PHARMACY.—A continuation of Pm 3. †*Five hours a week.* Spring term.

Pm 11. Prescriptions.—Critical examination of prescriptions from actual files, with reference to inelegance, physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compounding, etc.

The text-book is Ruddiman's Incompatibilities in Prescriptions. *Five hours a fortnight.* Spring term.

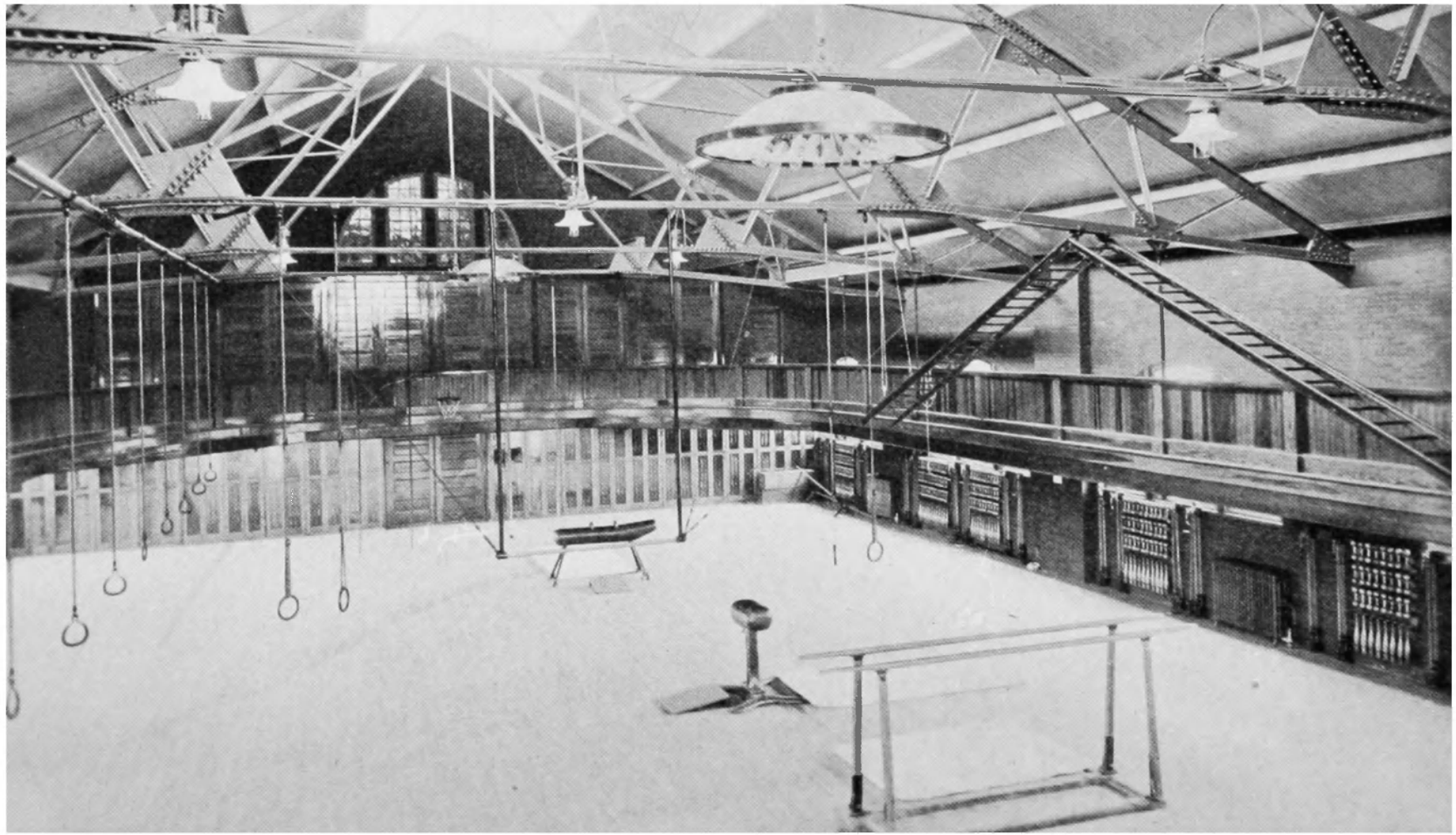
MILITARY SCIENCE AND TACTICS

Professor Runkle.

Each man student is required to take military drill, unless physically unfit, and to attend recitations in military science, during the first two years of his college course. In the junior and senior years this work is elective. The drill, course 1, occupies the whole of the fall term and the first ten weeks of the spring term, one hour a day, three days in the week, counting one and one-half hours in reckoning the student's total time. Members of the sophomore class are not required to drill in the spring term, however, but are required to attend lectures and recitations in military science during the whole term, course 2, three hours a fortnight.

Mt 1. Military Drill.—(a.) School of the soldier, school of the company, school of the battalion, and extended order movements. (b.) Target practice at known distances up to six hundred yards. Marksman's buttons are awarded to cadets who qualify. (c.) Military signaling with flag, lantern, heliograph, and field telegraph. (d.) Band practice. †*Three hours a week for the fall term and the first ten weeks of the spring term.*

Mt 2. Elements of Military Science.—Organization, equipment and supply of armies, camp sanitation, etc., conducted by text-book and lectures. *Three hours a fortnight.* Spring term.



THE DRILL HALL AND GYMNASIUM

ORGANIZATION OF THE UNIVERSITY

The University is divided into colleges, each offering several courses upon related subjects. The colleges are interdependent and together form a unit. The organization is as follows:

COLLEGE OF ARTS AND SCIENCES

- The Classical Course
- The Latin-Scientific Course
- The Scientific Course
- The Chemical Course
- The Preparatory Medical Course

COLLEGE OF AGRICULTURE

- The Agricultural Course
- The Special Courses in General Agriculture
- The Special Course in Horticulture
- The Special Course in Dairying
- The Special Course in Poultry Management
- The Agricultural Experiment Station

COLLEGE OF ENGINEERING

- The Civil Engineering Course
- The Mechanical Engineering Course
- The Electrical Engineering Course
- The Mining Engineering Course

COLLEGE OF PHARMACY

- The Pharmacy Course
- The Short Course in Pharmacy

SCHOOL OF LAW

Explanation of Tables.

The college year is divided equally into a fall term and a spring term. The year of the School of Law is divided into three terms, the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively. For details see the calendar.

The quota of studies prescribed for each student is, for a minimum, fifteen hours, and for a maximum, twenty hours of class-room work each week, exclusive of declamations and themes. The tables are made so as to require, with the military work of three hours a fortnight, approximately eighteen hours' work each week. The figures in the tables show the average number of hours a week given to each study. The figures 2.5 mean three hours one week and two the next. In making up the quota of studies, laboratory work and other exercises not requiring preparation count as half time—that is, two hours in the laboratory are counted as equivalent to one hour. The hours devoted to such studies are marked with a dagger (†) in the tables.

The abbreviations and numerals preceding a study refer to the explanatory statements to be found on the pages given.

COLLEGE OF ARTS AND SCIENCES

The aim of this college is to furnish a liberal education and to afford opportunity for specialization along literary, philosophical, and general and special scientific lines. The college comprises:

The Classical Course

The Latin-Scientific Course

The Scientific Course

The Chemical Course

The Preparatory Medical Course

The Classical Course

This course is planned for those who desire general culture. About two thirds of the work is elective. The required work includes Greek, Latin, mathematics, English, French, German, chemistry, psychology, and political economy. After the freshman year Greek and Latin are elective. The student may give special attention to language, mathematics, natural science, chemistry, or physics.

At graduation the student receives the degree of Bachelor of Arts. Upon the completion of one year's prescribed graduate work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Arts.

STUDIES OF THE CLASSICAL COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Gk1, Greek, p. 51	4.0	Gk2, Greek, p. 51	4.0
Lt1, Latin, p. 53	4.0	Lt2, Latin, p. 53	4.0
Gm2a, German, p. 58 or Rm2a, French, p. 56	2.5	Gm2b, German, p. 58 or Rm2b, French, p. 56	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63	2.5
Dr2, Math. Drawing, p. 85, 8 w	†3.0	Dr2, Math. Drawing, p. 85, 5 w	†3.0

SOPHOMORE YEAR.

Required.		*Required.*	
Gm1, German, p. 57 or Rm1, French, p. 56	4.0	Gm2, German, p. 58 or Rm2, French, p. 56	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ch1, General Chemistry, p 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68	2.0	Ch4, Laboratory Chemistry, p. 68	†2.0
Elective.		*Elective.*	
Gk3, Greek, p. 51	2.5	Gk4, Greek, p. 51	2.5
Gk9, Greek Sculpture, p. 52	2.5	Gk10, Greek Sculpture, p. 52	2.5
Gk11, Greek, p. 52	2.5	Gk12, Greek, p. 52	2.5
Gk13, Greek, p. 52	2.5	Gk14, Greek Religion, p. 52	2.5
Gk18, Greek Composition, p. 53	1.0	Gk15, Greek Composition, p. 53	1.0
At1, Italian Art, p. 53	1.0	Gk19, Greek Composition, p. 53	1.0
At3, Italian Art, p. 53	1.0	At2, Italian Art, p. 53	1.0
Lt3, Latin, p. 54	2.5	At4, Italian Art, p. 53	1.0
Gm3a, German, p. 58	2.5	Lt4, Latin, p. 54	2.5
Rm3a, French, p. 56	2.5	Gm3b, German, p. 58	2.5
Cv1, General History, p. 62	2.5	Rm3b, French, p. 56	2.5
Ms6, Analytical Geometry, p. 64.	5.0	Eh5, Old English, p. 59	2.5
Ps1, General Physics, p. 66	5.0	Ms5, Analytical Geometry, p. 64.	2.5
Ps12, General Physics, p. 67	2.5	Ms7, Calculus, p. 64	5.0
Ch5, Inorganic Chemistry, p. 68.	2.5	Ms11, Advanced Algebra, p. 65	2.5
Ch14, Qualitative Analysis, p. 69.	†5.0	Ps2, General Physics, p. 66	2.5
B11, General Biology, p. 71	2.5	Ps18, General Physics, p. 67	2.5
B12, Laboratory Biology, p. 72	†5.0	Ps5, Laboratory Physics, p. 66	†5.0
		Ch6, Inorganic Chemistry, p. 60.	2.5
		Ch15, Qualitative Analysis, p. 70.	†5.0
		Ag13, Bacteriology, p. 75, 9 w.. Ht8, Histol. of Plants, p. 77, 9 w.	†5.0
		Ht1, Botany, p. 76	†5.0
		Dr3, Mechanical Drawing, p. 85.	†5.0

JUNIOR YEAR.

Required.		*Required.*	
P11, Psychology, p. 60,	2.5	P12, Logic, p. 61	2.5
Elective.		*Elective.*	
Gk5, Greek, p. 51	2.5	Gk6, Greek, p. 51	2.5
Lt5, Latin, p. 54	2.5	Lt6, Latin, p. 54	2.5
Lt7, Roman Elegiac Poets, p. 54.	2.5	Lt8, Roman Elegiac Poets, p. 54.	2.5
Lt13, Roman Literature, p. 55	2.5	Lt14, Roman Literature, p. 55	2.5
Lt15, Roman Rhetoric and Oratory, p. 55	2.5	Lt. 16, Roman Rhetoric and Oratory, p. 55	2.5
Lt17, Roman Topography, p. 55.	1.0	Lt18, Roman Private Life, p. 55.	1.0
Lt19, Latin Writing, p. 56	1.0	Lt20, Roman Epigraphy, p. 56	1.0
Gm3a, German, p. 58	2.5	Gm3b, German, p. 58	2.5
Gm4a, German, p. 58	2.5	Gm4b, German, p. 58	2.5
Rm3a, French, p. 56	2.5	Rm3b, French, p. 56	2.5

JUNIOR YEAR—*Concluded.*

Rm4a, French, p. 56	2.5	Rm4b, French, p. 57	2.5
Rm9a, Spanish, p. 57	2.5	Rm9b, Spanish, p. 57	2.5
Rm11a, Italian, p. 57	2.5	Rm11b, Italian, p. 57	2.5
Pl9, History of Education, p. 62.	2.5	Pl4, Pedagogy, p. 61	2.5
Cv3, American History, p. 52	2.0	Pl8, Experimental Psychology, p. 61	†2.0
Cv4, Philosophy of History, p. 62	2.5	Cv2, English History, p. 52	2.5
Cv11, International Law, p. 62	2.5	Cv17, American History, p. 63	2.0
Ms8, Calculus, p. 64.	2.5	Ms10, Practical Astronomy, p. 64	2.5
Ms9, Desc. Astronomy, p. 64.	2.5	Ms13, Adv. Integ. Calculus, p. 65	2.5
Ms12, Advanced Integral Calculus, p. 65	2.5	Ms15, Differential Equations, p. 65	2.5
Ms20, Solid Analytical Geometry, p. 65	2.5	Ps7, Adv. Optics, p. 66	2.5
Ps8, Advanced Physics, p. 67	2.5	Ps10, Lab. Physics, p. 67	†5.0
Ps9, Lab. Physics, p. 67	†5.0	Ch13, Mineralogy, p. 69	†2.0
Ps11, Electrical Measurement and Testing, p. 67	†4.0	Bl7, Zoology, p. 72	2.5
Bl5, Zoology, p. 72	2.5	Bl8, Lab. Zoology, p. 72	†5.0
Bl6, Lab. Zoology, p. 72	†5.0	Ce7, Mechanics, p. 79	5.0
Bl11, Entomology, p. 73	2.5	Ee2, Electricity and Magnetism, p. 83	2.5
Ce6, Mechanics, p. 79	5.0		
Ee1, Electricity and Magnetism, p. 83	2.5		

SENIOR YEAR.

Required.		*Required.*	
Cv15, Constitutional Law and History, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Elective.		*Elective.*	
Gk7, Greek, p. 52	2.5	Gk8, Greek, p. 52	2.5
Lt9, Roman Satire, p. 54.	2.5	Lt10, Roman Satire, p. 54	2.5
Lt11, Roman Philosophy, p. 54	2.5	Lt12, Roman Philosophy, p. 55	2.5
Lt15, Roman Rhetoric and Oratory, p. 55	2.5	Lt16, Roman Rhetoric and Oratory, p. 55	2.5
Gm4a, German, p. 58	2.5	Gm4b, German, p. 58.	2.5
Gm5a, German, p. 58	2.5	Gm5b, German, p. 58	2.5
Rm4a, French, p. 56	2.5	Rm4b, French, p. 57	2.5
Rm5a, French, p. 57	2.5	Rm5b, French, p. 57	2.5
Eh10, English Literature, p. 60	2.5	Eh11, English Literature, p. 60	2.5
Eh12, English Literature, p. 60	2.5	Eh13, English Literature, p. 60	2.5
Pl3, History of Philosophy, p. 61.	2.5	Cv12, Library Work, p. 62	†5.0
Cv13, Political Economy, p. 63	2.5	Cv14, Political Economy, p. 63	2.5
Ms12, Adv. Integ. Calculus, p. 65	2.5	Ms13, Adv. Integ. Calculus, p. 65.	2.5
Ms16, Practical Astronomy, p. 65	2.5	Ms15, Differential Equations, p.65	2.5
Ms20, Solid Analytical Geometry, p. 65	2.5	Ms17, Practical Astronomy, p. 65	2.5
Bl13, Geology, p. 73	2.5	Bl9, Physiology, p. 72.	2.5
Bl14, Adv. Zoology, p. 73	2.5	Bl10, Lab. Physiology, p. 73	†5.0
Ht7, Lab. Horticulture, p. 77	†4.0	Bl14, Adv. Zoology, p. 73	2.5
Ht9, Plant Breeding, p. 76	2.5		
Ht10, Forestry, p. 77	2.5		

THE LATIN-SCIENTIFIC COURSE

This course differs from the classical course by omitting Greek. It requires an extensive study of modern languages, and permits a wide choice of elective work.

The required studies include Latin, English, and modern languages, mathematical and physical science, and political economy. Latin is not required, but may be elected, after the freshman year. By a proper selection of elective studies, the student may give special attention to language, mathematics, natural science, chemistry, or physics.

At graduation the student receives the degree of Bachelor of Philosophy. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Philosophy.

STUDIES OF THE LATIN-SCIENTIFIC COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Lt1, Latin, p. 53	4.0	Lt2, Latin, p. 53	4.0
Gm2a, German, p. 58 or Rm2a, French, p. 58	2.5	Gm2b, German, p. 58 or Rm2b, French, p. 56	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63 or Ms19, Sph. Trigonometry, p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68	†2.0	Ch4, Lab. Chemistry, p. 68	†2.0
Dr2, Math. Drawing, p. 85, 8 w	†3.0	Dr2, Math. Drawing, p. 85, 5 w	†3.0

SOPHOMORE YEAR.

Required.		*Required.*	
Gm1, German, p. 57 or Rm1, French, p. 56	4.0	Gm2, German, p. 58 or Rm2, French, p. 56	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ps1, General Physics, p. 66 or	5.0	Ps2, General Physics, p. 66, or	2.5
Ps12, General Physics, p. 67	2.5	Ps13, General Physics, p. 67	
Elective.		*Elective.*	
Gk9, Greek Sculpture, p. 52	2.5	Gk10, Greek Sculpture, p. 52	2.5
Gk11, Greek, p. 52	2.5	Gk12, Greek, p. 52	2.5
Gk13, Greek, p. 52	2.5	Gk14, Greek Religion, p. 52	2.5
At1, Italian Art, p. 53	1.0	At2, Italian Art, p. 53	1.0
At3, Italian Art, p. 53	1.0	At4, Italian Art, p. 53	1.0
Lt3, Latin, p. 54	2.5	Lt4, Latin, p. 54	2.5
Gm3a, German, p. 58	2.5	Gm3b, German, p. 58	2.5
Rm3a, French, p. 56	2.5	Rm3b, French, p. 56	2.5
Cv1, General History, p. 62	2.5	Eh5, Old English, p. 59	2.5
Ms6, Analytical Geometry, p. 64	5.0	Ms5, Analytical Geometry, p. 64	2.5
Ch5, Inorganic Chemistry, p. 68	2.5	Ms7, Calculus, p. 64	5.0
Ch14, Qualitative Analysis, p. 69	†5.0	Ms11, Advanced Algebra, p. 65	2.5
Bl1, General Biology, p. 71	2.5	Ps5, Lab. Physics, p. 66	†5.0
Bl2, Lab. Biology, p. 72	†5.0	Ch6, Inorganic Chemistry, p. 69	2.5
		Ch15, Qualitative Analysis, p. 70	†5.0
		Ag13, Bacteriology, p. 75, 9 w. Ht8, Histology of Plants, p. 77, 9 w	†5.0
		Ht1, Botany, p. 76	†5.0
		Dr3, Mechanical Drawing, p. 85	†5.0

JUNIOR YEAR.

Required.		*Required.*	
Eh8, English Literature, p. 60	2.5	Eh9, English Litrature, p. 60	2.5
Pl1, Psychology, p. 60	2.5	Pl2, Logic, p. 61	2.5
Elective.		*Elective.*	
Lt5, Latin, p. 54	2.5	Lt6, Latin, p. 54	2.5
Lt7, Roman Elegiac Poets, p. 54	2.5	Lt8, Roman Elegiac Poets, p. 54	2.5
Lt13, Roman Literature, p. 55	2.5	Lt14, Roman Literature, p. 55	2.5
Lt15, Roman Rhetoric and Oratory, p. 55	2.5	Lt16, Roman Rhetoric and Oratory, p. 55	2.5
Lt17, Roman Topography, p. 55	1.0	Lt18, Roman Private Life, p. 55	1.0
Lt19, Latin Writing, p. 56	1.0	Lt20, Roman Epigraphy, p. 56	1.0
Gm3a, German, p. 58	2.5	Gm3b, German, p. 55	2.5
Gm4a, German, p. 58	2.5	Gm4b, German, p. 58	2.5
Rm3a, French, p. 56	2.5	Rm3b, French, p. 56	2.5
Rm4a, French, p. 56	2.5	Rm4b, French, p. 57	2.5
Rm9a, Spanish, p. 57	2.5	Rm9b, Spanish, p. 57	2.5
Rm11a, Italian, p. 57	2.5	Rm11b, Italian, p. 57	2.5
Pl9, History of Education, p. 62	2.5	Pl4, Pedagogy, p. 61	2.5
Cv3, American History, p. 62	2.0	Pl8, Experimental Psychology, p. 61	†2.0
Cv4, Philosophy of History, p. 62	2.5	Cv2, English History, p. 62	2.5
Cv11, International Law, p. 62	2.5	Cv17, American History, p. 63	2.0
Ms8, Calculus, p. 64	2.5	Ms10, Practical Astronomy, p. 64	2.5
Ms9, Desc. Astronomy, p. 64	2.5	Ms13, Adv. Integral Calculus, p. 65	2.5
Ms12, Adv. Integral Calculus, p. 65	2.5	Ms15, Differential Equations, p. 65	2.5
Ms20, Solid Analytical Geometry, p. 65	2.5	Ps7, Advanced Optics, p. 66	2.5
Ps8, Advanced Physics, p. 67	2.5	Ps10, Laboratory Physics, p. 67	†5.0
Ps9, Lab. Physics, p. 67	†5.0	Ch18, Mineralogy, p. 69	†2.0
Ps11, Electrical Measurement and Testing, p. 67	†4.0	Bl7, Zoology, p. 72	2.5
Bl5, Zoology, p. 72	2.5	Bl8, Lab. Zoology, p. 72	†5.0
Bl6, Laboratory Zoology, p. 72	†5.0	Ce7, Mechanics, p. 79	5.0
Bl11, Entomology, p. 73	2.5	Ee2, Electricity and Magnetism, p. 83	2.5
Ce6, Mechanics, p. 78	5.0		
Ee1, Electricity and Magnetism, p. 83	2.5		

SENIOR YEAR.

Required.		*Required.*	
Cv13, Political Economy, p. 63	2.5	Cv14, Political Economy, p. 63	2.5
Cv15, Constitutional Law and History, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Elective.		*Elective.*	
Lt9, Roman Satire, p. 54	2.5	Lt10, Roman Satire, p. 54	2.5
Lt11, Roman Philosophy, p. 54	2.5	Lt12, Roman Philosophy, p. 55	2.5
Lt15, Roman Rhetoric and Oratory, p. 55	2.5	Lt16, Roman Rhetoric and Oratory, p. 55	2.5
Gm4a, German, p. 58	2.5	Gm4b, German, p. 58	2.5
Gm5a, German, p. 58	2.5	Gm5b, German, p. 58	2.5
Rm4a, French, p. 56	2.5	Rm4b, French, p. 57	2.5
Rm5a, French, p. 57	2.5	Rm5b, French, p. 57	2.5
Eh10, English Literature, p. 60	2.5	Eh11, English Literature, p. 60	2.5
Eh12, English Literature, p. 60	2.5	Eh13, English Literature, p. 60	2.5
Pl3, Hist. of Philosophy, p. 61	2.5	Cv12, Library Work, p. 62	†5.0
Ms12, Advanced Integral Calculus, p. 65	2.5	Ms13, Advanced Integral Calculus, p. 65	2.5
Ms16, Practical Astronomy, p. 65	2.5	Ms15, Differential Equations, p. 65	2.5
Ms20 Solid Analytical Geometry, p. 65	2.5	Ms17, Practical Astronomy, p. 65	2.5
Ps15, Lab. Physics, p. 67	†5.0	Ps16, Lab. Physics, p. 68	†5.0
Bl13, Geology, p. 73	2.5	Bl9, Physiology, p. 72	2.5
Bl14, Adv. Zoology, p. 73	2.5	Bl10, Lab. Physiology, p. 73	†5.0
Ht7, Lab. Horticulture, p. 77	†4.0	Bl14, Adv. Zoology, p. 73	2.5
Ht9, Plant Breeding, p. 77	2.5		
Ht10, Forestry, p. 77	2.5		

The Scientific Course

This course is arranged for those who seek a broad general training, based chiefly upon the study of science, modern languages, and history. It furnishes an admirable preparation for executive positions in banking, commercial, or manufacturing establishments, or for teaching.

The work of the freshman year consists of English, modern languages, history, mathematics, drawing, chemistry, and botany. After the freshman year, a large part of the work—varying from one third at the beginning to three fourths at the end—is elective. The required courses include analytical geometry, general physics, French, German, English literature, English history, United States history, constitutional history, pyschology, logic, and political economy. The elective studies may be selected to give a comprehensive course in the mathematical or natural sciences, or a specialized course in modern languages, mathematics, physics, or natural science.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

STUDIES OF THE SCIENTIFIC COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

Freshman Year.

Fall Term—18 weeks.	Hours.	Spring Term—18 weeks.	Hours.
Gm1, German, p. 57 or Rm1, French, p. 55	4.0	Gm2, German, p. 58 or Rm2, French, p. 56	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63 or Ms19, Sph. Trigonom., p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68	†2.0	Ch4, Laboratory Chemistry, p. 68	†2.0
Dr2, Math. Drawing, p. 85, 8 w	†3.0	Ht1, General Botany, p. 76	†5.0
		Dr2, Math. Drawing, p. 85, 5 w.	†3.0

Sophomore Year.

Required.		*Required.*	
Gm2a, German, p. 58 or Rm2a, French, p. 56	2.5	Gm2b, German, p. 58 or Rm2b, French, p. 56	2.5
Ps1, General Physics, p. 66 or Ps12, General Physics, p. 67	5.0 or 2.5	Ms5, Analytical Geometry, p. 64.	2.5
		Ps2, General Physics, p. 66 or Ps13, General Physics, p. 67	2.5
		Ps5, Laboratory Physics, p. 66	†5.0

SOPHOMORE YEAR—*Concluded.*

Elective.		*Elective.*	
Gk9, Greek Sculpture, p. 52	2.5	Gk10, Greek Sculpture, p. 52	2.5
Gk11, Greek, p. 52	2.5	Gk12, Greek, p. 52	2.5
Gk13, Greek, p. 52	2.5	Gk14, Greek Religion, p. 52	2.5
At1, Italian Art, p. 53	1.0	At2, Italian Art, p. 53	1.0
At3, Italian Art, p. 53	1.0	At4, Italian Art, p. 53	1.0
Gm3a, German, p. 58	2.5	Gm3b, German, p. 58	2.5
Rm3a, French, p. 56	2.5	Rm3b, French, p. 56	2.5
Cv1, General History, p. 62	2.5	Eh5, Old English, p. 59	2.5
Ms6, Analytical Geometry, p. 64	5.0	Ms7, Calculus, p. 64	5.0
Ch5, Inorganic Chemistry, p. 68	2.5	Ms11, Advanced Algebra, p. 65	2.5
Ch14, Qualitative Analysis, p. 69	†5.0	Ch6, Inorganic Chemistry, p. 69	2.5
Bl1, General Biology, p. 71	2.5	Ch15, Qualitative Analysis, p. 70	†5.0
Bl2, Laboratory Biology, p. 72	†5.0	Ag13, Bacteriology, p. 75, 9 w. / Ht8, Histol. of Plants, p. 71, 9 w.	†5.0

JUNIOR YEAR.

Required.		*Required.*	
Gm3a, German, p. 58 or Rm3a, French, p. 56	2.5	Gm3b, German, p. 58 or Rm3b, French, p. 56	2.5
Eh8, English Literature, p. 60	2.5	Eh9, English Literature, p. 60	2.5
Pl1, Psychology, p. 60	2.5	Pl2, Logic, p. 61	2.5
Cv3, American History, p. 62	2.0	Cv2, English History, p. 62	2.5
Elective.		*Elective.*	
Gm4a, German, p. 58	2.5	Gm4b, German, p. 58	2.5
Rm4a, French, p. 56	2.5	Rm4b, French, p. 57	2.5
Rm9a, Spanish, p. 57	2.5	Rm9b, Spanish, p. 57	2.5
Rm11a, Italian, p. 57	2.5	Rm11b, Italian, p. 57	2.5
Pl9, History of Education, p. 62	2.5	Pl4, Pedagogy, p. 61	2.5
Cv4, Philosophy of History, p. 62	2.5	Pl8, Experimental Psychology, p. 61	†2.0
Cv11, International Law, p. 62	2.5	Ms10, Practical Astronomy, p. 64	2.5
Ms8, Calculus, p. 64	2.5	Ms13, Adv. Integ. Calculus, p. 65	2.5
Ms9, Desc. Astronomy, p. 64	2.5	Ms15, Differential Equations, p. 65	2.5
Ms12, Adv. Integ. Calculus, p. 65	2.5	Ps7, Advanced Optics, p. 66	2.5
Ms20, Solid Analy. Geometry, p. 65	2.5	Ps10, Laboratory Physics, p. 67	†5.0
Ps8, Adv. Physics, p. 67	2.5	Ch13, Mineralogy, p. 69	†2.0
Ps9, Lab. Physics, p. 67	†5.0	Bl7, Zoology, p. 72	2.5
Ps11, Electrical Measurement and Testing, p. 67	†4.0	Bl8, Laboratory Zoology, p. 72	†5.0
Bl5, Zoology, p. 72	2.5	Ce7, Mechanics, p. 79	5.0
Bl6, Laboratory Zoology, p. 72	†5.0	Ee2, Electricity and Magnetism, p. 83	2.5
Bl11, Entomology, p. 73	2.5		
Ce6, Mechanics, p. 78	5.0		
Ee1, Electricity and Magnetism, p. 83	2.5		

SENIOR YEAR.

Required.		*Required.*	
Cv13, Political Economy, p. 63	2.5	Cv14, Political Economy, p. 63	2.5
Cv15, Constitutional Law and History, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Elective.		*Elective.*	
Gm4a, German, p. 58	2.5	Gm4b, German, p. 58	2.5
Gm5a, German, p. 58	2.5	Gm5b, German, p. 58	2.5
Rm4a, French, p. 56	2.5	Rm4b, French, p. 56	2.5
Rm5a, French, p. 57	2.5	Rm5b, French, p. 57	2.5
Eh10, English Literature, p. 60	2.5	Eh11, English Literature, p. 60	2.5
Eh12, English Literature, p. 60	2.5	Eh13, English Literature, p. 60	2.5
Pl3, Hist. of Philosophy, p. 61	2.5	Cv12, Library Work, p. 62	†5.0
Ms12, Adv. Integ. Calculus, p. 65	2.5	Ms13, Adv. Integ. Calculus, p. 65	2.5
Ms16, Practical Astronomy, p. 65	2.5	Ms15, Differential Equations, p. 65	2.5

SENIOR YEAR—*Concluded.*

Ms20, Solid Analytical Geometry, p. 65	2.5	Ms17, Practical Astronomy, p. 65	2.5
Ps15, Laboratory Physics, p. 67	†5.0	Ps16, Laboratory Physics, p. 68	†5.0
Bl13, Geology, p. 73	2.5	Bl9, Physiology, p. 72	2.5
Bl14, Advanced Zoology, p. 73	2.5	Bl10, Lab. Physiology, p. 73	†5.0
Ht7, Lab. Horticulture, p. 77	†4.0	Bl14, Advanced Zoology, p. 73	2.5
Ht9, Plant Breeding, p. 77	2.5		
Ht10, Forestry, p. 77	2.5		

THE CHEMICAL COURSE

This course is designed for those who plan to become professional chemists and analysts, managers or chemists of industries which require an extensive knowledge of chemistry, or teachers of chemistry. Attention is given to preparation for the work of the agricultural experiment stations. In addition to a theoretical knowledge of chemistry, the student acquires, in his biological studies, knowledge of comparative anatomy, and of the lower forms of life, and, in his work in the laboratories, facility in the manipulation of chemical apparatus and the microscope.

Lectures and recitations are closely associated with practical work in the laboratories. The student is drilled in the use of chemical apparatus, in accurate observation, and in careful interpretation of directions.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

STUDIES OF THE CHEMICAL COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—WEEKS.	Hours.
Gm1, German, p. 57 or Gm2a, German, p. 58 (2.5)	4.0	Gm2, German, p. 58 or Gm2b, German, p. 58 (2.5)	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63 or Ms19, Sph. Trigonometry, p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68	†2.0	Ch4, Laboratory Chemistry, p. 68	†2.0
Dr1, Drawing, p. 85	†5.0	Ht1, General Botany, p. 76	†5.0
Dr2, Math. Drawing, p. 85, 8 w	3.0	Dr2, Math. Drawing, p. 85, 5 w	†3.0

SOPHOMORE YEAR.

Gm3a, German, p. 58	2.5	Gm3b, German, p. 58	2.5
Rm1, French, p. 56 or Rm2a, French, p. 56 (2.5)	4.0	Rm2, French, p. 56 Rm2b, French, p. 56 (2.5)	4.0
Ps12, General Physics, p. 67	2.5	Ms5, Analytical Geometry, p. 64	2.5
Ch5, Inorganic Chemistry, p. 68	2.5	Ps5, Laboratory Physics, p. 66	†5.0
Ch14, Qualitative Analysis, p. 69,	†10.0	Ps13, General Physics, p. 67	2.5
B11, General Biology, p. 71	2.5	Ch6, Inorganic Chemistry, p. 69	2.5
B12, Laboratory Biology, p. 72	†5.0	Ch15, Qualitative Analysis, p. 70,	†7.0

JUNIOR YEAR.

Gm4a, German, p. 58 or Rm3a, French, p. 56	2.5	Gm4b, German, p. 58 or Rm3b, French, p. 56	2.5
P11, Psychology, p. 60	2.5	P12, Logic, p. 61	2.5
Ch7, Organic Chemistry, p. 69	2.5	Ch8, Organic Chemistry, p. 69	2.5
Ch10, Analytical Methods, p. 69	1.0	Ch19, Volumetric Analysis and Assaying, p. 70	†15.0
Ch16, Quan. Analysis, p. 70	†5.0	Eh9, Eng. Literature, p. 60 or Cv2, English History, p. 62 or	2.5
Ch18, Quan. Analysis, p. 70	†10.0		
P14, Pedagogy, p. 61 or Eh8, English Literature, p. 60 or Ee1, Electricity and Magnetism, p. 83 or Ms9, Descrip. Astronomy, p. 64	2.5		

SENIOR YEAR.

Cv13, Political Economy, p. 63	2.5	Cv14, Political Economy, p. 63	2.5
Cv15, Constitutional Law and History, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Ch12, Organic Chemicals, p. 69	†5.0	Ch11, Laboratory Processes, p. 69	2.5
Ch20, Agricultural Analysis, p. 70	†9.0	Ch24, Industrial Chemistry, p. 71	2.5
Ch21, Toxicology and Urinalysis, p. 70	†1.0	Ch28, Dyeing, p. 71, 2 w. †15 Ch22, Thesis Work, p. 71, 11 w. †15 Ag13, Bacteriology, p. 75, 5 w. †10	†15.0
Ch23, Organic Chemistry, p. 71	2.5		
B113, Geology, p. 73	2.5		

THE PREPARATORY MEDICAL COURSE

This course is arranged to meet the needs of students preparing to become physicians. It also offers to those who are interested in the biological sciences a very desirable training for teaching or investigation.

The technical work of the course consists mainly of two lines of study, chemical and biological. In both of these lines the work is continued through the greater part of the course, and students receive sufficient training to make them familiar with methods and apparatus. Accurate observation and the careful consideration of the meaning of observed facts are the important features of this course.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

STUDIES OF THE PREPARATORY MEDICAL COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Gm1, German, p. 57 or / Gm2a, German, p. 58 (2.5)	4.0	Gm2, German, p. 58 or / Gm2b, German, p. 58 (2.5)	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63, or / Ms19, Sph. Trigonometry, p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68,	2.0	Ch4, Laboratory Chemistry, p. 68	†2.0
Dr1, Drawing, p. 85,	†5.0	Ht1, General Botany, p. 76.	†5.0
Dr2, Math. Drawing, p. 85, 8 w.	†3.0	Dr2, Math. Drawing, p. 85, 5 w.	†3.0

SOPHOMORE YEAR.

Gm3a, German, p. 58	2.5	Gm3b, German, p. 58.	2.5
Rm1, French p. 56 or / Rm2a, French, p. 56 (2.5)	4.0	Rm2, French, p. 56 or / Rm2b, French, p. 56 (2.5)	4.0
Ps12, General Physics, p. 67.	2.5	Ps5, Laboratory Physics, p. 66	†5.0
Ch5, Inorganic Chemistry, p. 68.	2.5	Ps13, General Physics, p. 67.	2.5
Ch14, Qualitative Analysis, p. 69.	†6.0	Ch6, Inorganic Chemistry, p. 69.	2.5
B11, General Biology, p. 71.	2.5	Ch15, Qualitative Analysis, p. 70.	†5.0
B12, Laboratory Biology, p. 72.	†5.0	Ag13, Bacteriology, p. 75, 9 w. / Ht8, Histology of Plants, p. 77, 9 w.	†5.0

JUNIOR YEAR.

Gm4a, German, p. 58 or / Rm3a, French, p. 56	2.5	P12, Logic, p. 61 or / Ag11, Veterinary Science, p. 75	2.5
P11, Psychology, p. 60.	2.5	Ch19, Volumetric Analysis, p. 70.	†1.0
Ch7, Organic Chemistry, p. 69.	2.5	Ch21, Toxicology and Urinalysis, p. 70	†1.0
Ch16, Quantitative Analysis, p. 70	†6.0	B17, Zoology, p. 72.	2.5
B15, Zoology, p. 72.	2.5	B18, Laboratory Zoology, p. 72.	†5.0
B16, Laboratory Zoology, p. 72.	†5.0	Ag2, Biological Chemistry, p. 73.	5.0
Ag1, Biological Chemistry, p. 73.	2.5		

SENIOR YEAR.

Cv1, General History, p. 62	2.5	Cv14, Political Economy, p. 63.	2.5
Cv13, Political Economy, p. 63.	2.5	Cv16, Constitutional Law and History, p. 63.	2.5
Cv15, Constitutional Law and History, p. 63.	2.5	B19, Physiology, p. 72	2.5
B113, Geology, p. 73.	2.5	B110, Laboratory Physiology, p. 73	†5.0
Pm3, Laboratory Pharmacy, p. 86, 9 w. / Ch27, Laboratory Physiological Chemistry, p. 71, 9 w.	†10.0	P12, Logic, p. 73 or / Ag11, Veterinary Science, p. 75	2.5
Pm7, Materia Medica, p. 77.	2.5	Ag14, Animal Histology, p. 76, 9 w. / Ag15, Lab. Bacteriology, p. 76, 9 w.	†10.0

COLLEGE OF AGRICULTURE

The aim of the College of Agriculture is to prepare young men to become farmers, or teachers or investigators of agricultural subjects. The instruction is arranged, first, to secure for the student that intellectual development which is a condition fundamental to the highest success in any calling, and, second, to give the necessary technical knowledge. The college comprises:

The Agricultural Course
The Special Courses in General Agriculture
The Special Course in Horticulture
The Special Course in Dairying
The Special Course in Poultry Management
The Agricultural Experiment Station

The Agricultural Course

This course is designed for those who wish to follow agriculture as a business, or purpose to become teachers or investigators in the sciences related to agriculture. It is broadly educational, particularly in the natural sciences and their relations to human needs and activities, and gives an admirable preliminary training for either business or professional life. The distinctive studies of this course are along technical lines, but the branches pertaining to general culture, to social and civil relations, occupy an important place.

The theoretical instruction, especially that of the last two years, is associated with practical work and observation, whenever it is necessary for the demonstration of a principle, or if skilled labor is involved; but the student's time is not consumed in merely manual operations.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

STUDIES OF THE AGRICULTURAL COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Gm1, German, p. 57 or Gm2a, German, p. 58 (2.5)	4.0	Gm2, German, p. 58 or Gm2b, German, p. 58 (2.5)	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63 or Ms19, Sph. Trigonometry, p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68	†2.0	Ch4, Laboratory Chemistry, p. 68	†2.0
Dr1, Drawing, p. 85	†5.0	Ht1, General Botany, p. 76	†5.0
Dr2, Math. Drawing, p. 85, 8 w.	†3.0	Dr2, Math. Drawing, p. 85, 5 w.	†3.0

SOPHOMORE YEAR.

Gm3a, German, p. 58	2.5	Gm3b, German, p. 58	2.5
Rm1, French, p. 56 or Rm1a, French, p. 56 (2.5)	4.0	Rm2, French, p. 56 or Rm2b, French, p. 56 (2.5)	4.0
Ps12, General Physics, p. 67	2.5	Ps5, Laboratory Physics, p. 66	†5.0
Ch5, Inorganic Chemistry, p. 68	2.5	Ps13, General Physics, p. 67	2.5
Ch14, Qualitative Analysis, p. 69	†6.0	Ch6, Inorganic Chemistry, p. 69	2.5
Bl1, General Biology, p. 71	2.5	Ch16, Quan. Analysis, p. 70	†8.0
Bl2, Laboratory Biology, p. 72	†5.0	Ag13, Bacteriolgy, p. 75, 9 w. Ht8, Hist. of Plants, p. 77, 9 w.	†5.0

JUNIOR YEAR.

Gm4a, German, p. 58 or Rm3a, French, p. 56	2.5	*Cv2, English History, p. 72	2.5
Ch7, Organic Chemistry, p. 69	2.5	Ag2, Biological Chemistry, p. 73,	5.0
Ch20, Agricul. Analysis, p. 70	†6.0	*Ag5, Agricultural Engineering, p. 74, 9 w.	2.5
*Bl11, Entomology, p. 73	2.5	*Ag7, Dairying, p. 74, 9 w.	
*Bl12, Laboratory Entomology, p. 73	†2.0	*Ag10, Dairy Practice, p. 75, 12 w. *Ag12, Dissecting, p. 75, 6 w.	†7.0
Ag1, Biological Chemistry, p. 73,	2.5	*Ht4, Plant Variation, p. 76, 9 w.	
*Ht2, Pomology, p. 76, 9 w. *Ht3, Vegetable Gardening, p. 76, 9 w.	2.5	*Ht5, Landscape Gardening, p. 76, 9 w.	2.5
*Ht6, Laboratory Horticulture, p. 77	†5.0	*Ht7, Laboratory Horticulture, p. 77	†4.0

SENIOR YEAR.

Pl1, Psychology, p. 60	2.5	Pl2, Logic, p. 61	2.5
Cv13, Political Economy, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Cv15, Constitutional Law and History, p. 63	2.5	‡Bl9, Physiology, p. 72	2.5
‡Bl3, Cryptogamic Botany, p. 72,	2.5	‡Bl10, Laboratory Physiology, p. 73	†5.0
‡Bl4, Laboratory Botany, p. 72	†2.0	‡Ag6, Stock Feeding, p. 74, 7 w.	
Bl13, Geology, p. 73	2.5	‡Ag8, Stock Breeding, p. 75, 7 w.	5.0
‡Ag3, Agricultural Chemistry, p. 74, 9 w.	2.5	‡Ag9, Poultry Industry, p. 75, 4 w.	
‡Ag4, Agricultural Physics, p. 74, 9 w.		‡Ag11, Veterinary Science, p. 75.	2.5
‡Ht10, Forestry, p. 77	2.5		

* Given to juniors and seniors in fall term of even years and spring term of odd years.

‡ Given to juniors and seniors in fall term of odd years and spring term of even years.

The Special Courses in Agriculture

For those who can meet the expense, the investment of time and money necessary to complete the four years course, is most wise. To others the Special Courses in Agriculture are offered. Students are admitted to courses of such length as their time will allow, and of such breadth as their previous training will permit.

For admission to these courses, applicants should possess a good common school education. No formal entrance examination is required for admission to courses of one term or less, but the Professor of Agriculture will satisfy himself of the fitness of candidates to pursue the course with success. The requirements for admission to courses of one year or more are given on page 41.

These courses are intended to give the greatest amount of directly useful knowledge that can be acquired in the time allotted. The studies pursued must usually be selected from those announced in the catalogue, but they will be arranged, so far as practicable, to meet the needs of each student.

The annual expenses for courses of one year or more, are the same as those of students in the four years courses. No charge is made for rooms. Students in the special courses, who are in attendance for one term or less, are not charged tuition.

These courses, including the work in agriculture, horticulture, animal industry, and veterinary science, are in the general charge of the Professor of Agriculture, to whom inquiries should be addressed.

The outline of the subjects which may be profitably pursued, and which a student may expect to complete within the time allotted, is listed below:

Subjects which may be taken in one term or less

Plant and Animal Nutrition; Fertilizers and Manures; Breeds, Breeding and Feeding; Farm Machinery; Farm Drainage; Veterinary Science; Bacteriology; Crops and Crop Production; Farm Gardening; Carpentry; Blacksmithing; Farm Accounts; Business Law; Injurious Insects; Injurious Fungi; Bacteriology; Propagation of Plants; Vegetable Gardening; Spraying, and Spraying Machines; Fruit Culture; Economic Botany; Ornamental Gardening; Greenhouse Construction and Management.

SUBJECTS WHICH MAY BE TAKEN IN A ONE YEAR COURSE IN AGRICULTURE

General Chemistry; Agricultural Chemistry; Cryptogamic Botany; Laboratory Botany; Plant Variation; Landscape Gardening; Laboratory Horticulture; Pomology; Vegetable Gardening; Invertebrate Zoology; Laboratory Zoology; Entomology; Stock Feeding; Poultry Industry; Dairy Practice; Veterinary Science; Agricultural Physics; Agricultural Engineering; Business Law; Carpentry; Forge Work.

SUBJECTS WHICH MAY BE TAKEN IN A TWO YEAR COURSE IN AGRICULTURE

First Year. Rhetoric; Elementary Physics; General Chemistry; Agricultural Mechanics; Cryptogamic Botany; Laboratory Botany; Invertebrate Zoology; Laboratory Zoology; Drawing; Business Law; Entomology; Laboratory Horticulture; Pomology; Vegetable Gardening; General Botany; Carpentry; Forge Work.

Second Year. Laboratory Chemistry; Biological Chemistry; Agricultural Chemistry; Vertebrate Zoology; Physiology; Dissection; Veterinary Science; Stock Feeding; Plant Variation; Landscape Gardening; Laboratory Horticulture; Geology; Agricultural Physics; Agricultural Engineering; Dairying; Stock Feeding; Poultry Industry; Dairy Practice; Bacteriology.

Short Winter Course in General Agriculture and Dairying

The Course in Dairying is intended to meet the needs of those who wish to fit themselves for managers of creameries and cheese factories. If the course is pursued during two terms, and two seasons' satisfactory work is performed in a butter or cheese factory, the student will be granted a certificate of proficiency.

This course begins on the Tuesday following the last Friday of January, and continues six weeks.

The subjects taken up are: Chemistry of Plants and Animal Nutrition; Dairying Feeds and Feeding; Breeds and Breeding; Crop Production; Bacteria of the Dairy; Diseases of Animals; Sheep Husbandry; Dairy Practice; Shop Work.

Short Special Course in Horticulture

On the Tuesday following the close of the Short Course in Dairying the special three weeks' course in Horticulture begins.

There is crowded into this short course all of the practical, helpful information possible. It is necessarily somewhat in the nature of an extended farmers' institute, and a special effort is made to outline future work for the students. The following subjects are taken up: Chemistry of Soils and Fertilizers; Chemistry of Plants. How Plants Feed; Plant Propagation; Orchard Culture; Small Fruit Culture; Vegetable Gardening; Insects and Fungi; Spraying of Plants.

Short Special Course in Poultry Management

On the Tuesday following the close of the Short Course in Horticulture the special three weeks' course in poultry management begins. The design is to make the course practical and valuable to persons who desire to engage in the pursuit of poultry growing and egg production. The subjects studied are embryology, buildings and appliances, incubation, egg production and breeds. The afternoons are devoted to work with incubators, brooders, and the treatment and handling of young chickens, growing stock, and mature fowl.

The Agricultural Experiment Station

The Maine Agricultural Experiment Station owes its existence to an act of Congress, approved March 2, 1887, popularly known as the Hatch Act. The act of the legislature accepting the congressional grant made the Station a department of the University of Maine.

The affairs of the Station are considered by an advisory council consisting of a committee of the trustees of the University, the president of the University, members of the Station staff, the Commissioner of Agriculture, and representatives from the State Pomological Society, and the State Grange. The recommendations of the council are referred to the trustees for ratification. The Station receives $15,000 annually from the general government.

The inspection of fertilizers, the inspection of concentrated commercial feeding stuffs, and the testing of the graduated glassware used in creameries, are entrusted to the Station through its director, who is responsible for the execution of the public laws relating to these matters.

The Station publishes the account of its work in bulletin form. The bulletins for a year form a volume of about 200 pages and make up the annual report. Bulletins which contain matter of immediate value to practical agriculture are sent free of cost to the entire mailing list of the Station. On request, the name of any resident of Maine will placed on the mailing list of the Station. Bulletins which contain the record of experiments involving the technical language of science, and containing detailed data are sent to Station workers and others interested in the science of agriculture, but are not sent to farmers unless they are specially asked for. The annual report of the Station is also bound with the Agriculture of Maine, copies of which can be had on application to the Commissioner of Agriculture, Augusta, Maine.

COLLEGE OF ENGINEERING

The College of Engineering provides instruction along the lines indicated by the divisions made below. Two years of general studies, including the natural sciences, mathematics, modern languages, philosophy and economics, are followed by two of technical training. Opportunity is offered for special work in addition to that of the required courses. The college comprises:

The Civil Engineering Course
The Mechanical Engineering Course
The Electrical Engineering Course
The Mining Engineering Course

The Civil Engineering Course

The object of this course is to give the student a knowledge of mathematics, mechanics, and drawing, experience in the care and use of engineering instruments, and a drill in the application of mathematical principles and rules, with a view to fitting him at graduation to apply himself at once to engineering work. The course is planned to furnish not only technical instruction, but also the basis of a liberal education.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing, including the making of original designs and the preparation of the necessary drawings. Effort is made to acquaint the student with the best engineering structures, and with standard engineering literature.

The engineering building contains recitation rooms, designing rooms, testing laboratories, drawing rooms, and instrument rooms, and is well equipped.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Civil Engineer.

STUDIES OF THE CIVIL ENGINEERING COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Gm1, German, p. 57 or Rm1, French, p. 56	4.0	Gm2, German, p. 58 or Rm2, French, p. 56	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63 or Ms19, Sph. Trigonometry, p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68	†2.0	Ch4, Laboratory Chemistry, p.68	†2.0
Dr1, Drawing, p. 85	†5.0	Dr2, Math. Drawing, p. 85, 5 w.	†3.0
Dr2, Math. Drawing, p. 85, 8 w.	†3.0	Dr3, Mechanical Drawing, p. 85.	†5.0

SOPHOMORE YEAR.

Gm2a, German, p. 58 or Rm2a, French, p. 56	2.5	Gm2b, German, p. 58 or Rm2b, French, p. 56	2.5
Ms6, Analytical Geometry, p. 64	5.0	Ms7, Calculus, p. 64	5.0
Ps1, General Physics, p. 66	5.0	Ps2, General Physics, p. 66.	2.5
Ce18, Sanitary Science, p. 80	1.0	Ps5, Laboratory Physics, p. 66	†5.0
Dr4, Mechanical Drawing, p. 85	†5.0	Ce1, Plane Surveying, p. 78	2.5
Dr6, Descriptive Geometry, p. 86	2.5	Ce2, Field Work in Surveying, p. 78	†4.0
		Dr7, Descriptive Astronomy, p.86	1.5

JUNIOR YEAR.

Pl1, Psychology, p. 60	2.5	Pl2, Logic, p. 61	2.5
Ms8, Calculus, p. 64	2.5	Cv2, English History, p. 62	2.5
Gm3a, German, p. 56 or Rm3a, French, p. 56 or Ms12, Adv. Integ. Calculus, p. 65 or Ms20, Solid Analytical Geometry, p. 65 or Ps8, Math Physics, p. 67 or Ps9, Laboratory Physics, p. 67 (†5) or Bl13, Geology, p. 73	2.5	Gm3b, German, p. 58 or Rm3b, French, p. 56 or Ms13, Adv.Int.Calculus, p. 65 or Ms15, Differential Equations, p. 65 or Ps7, Advanced Optics, p. 66 or Ps10, Laboratory Physics, p. 67 (†5.0) elective with †5 hrs. of Dr5, Dr8, and Ce9.	2.5
Ce3, Railroad Engineering, p. 78	2.5	Dr5, General Drawing, p.85, 5 w.	†12.0
Ce4, Railroad Work, p. 78	†5.0	Dr8, Stereotomy, p. 86, 5 w.	
Ce5, Highway Engineering, p. 78	1.0	Ce9, Higher Surveying, p.79, 8 w.	
Ce6, Mechanics, p. 78	5.0	Ce7, Mechanics, p. 79	5.0
		Ce10, Hydraulics, p. 79	2.5

SENIOR YEAR.

Cv13, Political Economy, p. 63	2.5	Cv14, Political Economy, p. 63	2.5
Cv15, Constitutional Law and History, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Gm4a, German, p. 58 or Rm4a, French, p. 56 or Ms9, Desc. Astronomy, p. 64 or Math., or Physics as in Junior Year.	2.5	Ms10, Practical Astronomy, p. 64	2.5
Ce8, Sanitary Engineering, p. 79	2.5	Ce13, Structures, p. 79	5.0
Ce12, Structures, p. 79	5.0	Ce15, Designing and Thesis Work, p. 80 or Math. or Physics, as in Junior Year, or Gm4b, German, p. 58 or Rm4b, French, p. 57, elective with †5 hours of Ce15	†12.0
Ce11, Hydraulic Field Work, p. 79, 6 w. Ce14, Designing, p. 80, 12 w.	†7.0		

The Mechanical Engineering Course

This course is designed to give such a training in mathematics, mechanics, the principles of mechanism, in drawing, and manual arts, as shall make the student competent to deal successfully with the problems of mechanical engineering. The technical courses include the geometry of machinery; gearing, with problems and practice; the transmission of motion and power by belts, cams, couplings and links; the study and designing of the valve and link motions used in the steam engine; analytic mechanics; hydro-mechanics; the strength of materials; the expansion of steam; the construction of steam engines; and the designing of steam boilers.

The methods of instruction include lectures, recitations, practice in the various branches of shop-work, the solution of numerous problems, the testing of theoretical results by comparison with modern machinery, the inspection of important plants, and the use of journals and catalogues.

The recitation rooms and designing rooms are in Wingate Hall. The machine shop is equipped with iron working and wood working machinery of the most approved forms.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Mechanical Engineer.

STUDIES OF THE MECHANICAL ENGINEERING COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—10 WEEKS.	Hours.
Gm1, German, p. 57 or Rm1, French, p. 56	4.0	Gm2, German, p. 58 or Rm2, French, p. 56	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63 or Ms19, Sph. Trigonom., p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68	†2.0	Ch4, Laboratory Chemistry, p. 68	†2.0
Dr1, Drawing, p. 85	†5.0	Dr2, Math. Drawing, p. 85, 5 w	†3.0
Dr2, Math. Drawing, p. 85, 8 w	†3.0	Dr3, Mechanical Drawing, p. 85	†5.0

SOPHOMORE YEAR.

Gm2a, German, p. 58 or Rm2a, French, p. 56	2.5	Gm2b, German, p. 58 or Rm2b, French, p. 56	2.5
Ms6, Analytical Geometry, p. 64	5.0	Ms7, Calculus, p. 64	5.0
Ps1, General Physics, p. 66	5.0	Ps2, General Physics, p. 66	2.5
Me2, Forge Work, p. 80, 12 w.		Ps5, Laboratory Physics, p. 76	†5.0
Me19, Machine Drawing, p. 82, 6 w.	†7.0	Me1, Carpentry, p. 80	†5.0
		Me3, Kinematics, p. 81	†5.0
Dr6, Descriptive Geometry, p. 86	2.5	Dr7, Descriptive Geometry, p. 86	1.5

JUNIOR YEAR.

Pl1, Psychology, p. 60	2.5	Pl2, Logic, p. 61	2.5
Ms8, Calculus, p. 64	2.5	Cv2, English History, p. 62	2.5
Gm3a, German, p. 58 or Rm3a, French, p. 56 or Ms12, Advanced Integral Calculus, p. 65 or Ms20, Solid Analytical Geometry, p. 65 or Ps8, Advanced Physics, p. 67 or Ps9, Laboratory Physics, p. 67, (†5) or Bl13, Geology, p. 73	2.5	Ce7, Mechanics, p. 79	5.0
		Me9, Machine Design, p. 81	3.5
		Gm3b German, p. 58 (2.5) or Rm3b, French, p. 56 (2.5) or Me4, Machine Work, p. 51 or Ms13, Advanced Integral Calculus, p. 65 (2.5) or Ms15, Differential Equations, p. 65 (2.5) or Ps7, Advanced Optics, p. 66 (2.5) or Ps10, Laboratory Physics, p. 67 (†5) elective with †5 hrs. of Me4,	†10.0
Ce6, Mechanics, p. 78	5.0		
Me4, Machine Work, p. or 81 Ps11, Electrical Measurement and Testing, p. 67, elective with †4 hrs. of Me4	†8.0		
Ee9, Dynamos, p. 84	2.0		

SENIOR YEAR.

Cv13, Political Economy, p. 63	2.5	Cv14, Political Economy, p. 63	2.5
Cv15, Constitutional Law and History, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Me8, Structures, p. 81	2.5	Me13, Testing, p. 82, 2d 9 w	2.5
Me10, Hydro-Mechanics, p. 81	2.5	Me14, Steam Engine, p. 82	3.5
Me11, Heat and Steam, p. 81	2.5	Me15, Steam Engine Design, p. 82. 9 w.. and Me16, Thesis Work, p. 82,9 w.or Mathematics or Physics as in Junior year or	†15.0
Me12, Steam Boiler Design, p. 82 or Mathematics or Physics as in Junior year or Gm4a, German, p. 58 or Rm4a, French, p. 56, elective with †5 hrs. of Me12,	†12.0	Gm4b, German, p. 58 or Rm4b, French, p. 57, elective with †5 hrs. of Me15 and Me16,	
		Ee10, Dynamo Laboratory Work, p. 84, 1st 9 w	†5.0

THE ELECTRICAL ENGINEERING COURSE

This course is intended to provide a thorough preparation in the scientific principles involved in the practice of electrical engineering; to explain and illustrate the application of these principles to the design, construction, installation and running of apparatus with which the electrical engineer has to deal; and to give practice and experience in the care and management of the same.

For the first two years the Electrical and Mechanical Engineering courses are identical. During the junior year students in electrical engineering take up electricity and magnetism, and dynamo designs. This work is followed in the senior year by recitations, lectures, drawing room and laboratory work in direct and alternating currents.

During this time the student also acquires a knowledge of shop work, machanical drawing, mathematics, physics, mechanics, steam engineering and kindred subjects. Beside the technical work he receives training in English, French and German, logic, history, political economy and constitutional law.

The equipment for laboratory work is ample. The apparatus includes most of the standard forms of direct and alternating current machines and instruments.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Electrical Engineer.

STUDIES IN THE ELECTRICAL ENGINEERING COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Gm1, German, p. 57 or Rm1, French, p. 56	4.0	Gm2, German, p. 58 or Rm2, French, p. 56	4.0
Eb3, Rhetoric, p. 59	2.5	Eb4, Rhetoric, p. 59	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63 or Ms10, Sph. Trigonometry, p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Lab. Chemistry, p. 68	†2.0	Ch4, Lab. Chemistry, p. 68	†2.0
Dr1, Drawing, p. 85	†5.0	Dr2, Math. Drawing, p. 85, 5 w.	†3.0
Dr2, Math. Drawing, p. 85, 5 w.	†3.0	Dr3, Mechanical Drawing, p. 85.	†5.0

SOPHOMORE YEAR.

Gm2a, German, p. 58 or Rm2a, French, p. 56	2.5	Gm2b, German, p. 58, or Rm2b, French, p. 56	2.5
Ms6, Analytical Geometry, p. 64	5.0	Ms7, Calculus, p. 64	5.0
Ps1, General Physics, p. 66	5.0	Ps2, General Physics, p. 66	2.5
Me2, Forge Work, p. 80, 12 w. Me19, Machine Draw., p. 82, 6 w.	†7.0	Ps5, Laboratory Physics, p. 66	†5.0
		Me1, Carpentry, p. 80	†5.0
		Me3, Kinematics, p. 81	†5.0
Dr6, Descriptive Geometry, p. 86	2.5	Dr7, Descriptive Geometry, p. 86	1.5

Junior Year.

P11, Psychology, p. 60	2.5	P12, Logic, p. 61	2.5
Ms8, Calculus, p. 64	2.5	Cv2, English History, p. 62	2.5
Gm3a, German, p. 58 or Rm3a, French, p. 56 or Ms12, Adv. Integral Calculus, p. 65 or Ms20, Solid Analytical Geometry, p. 65 or Ps8, Advanced Physics, p. 67 or Ps9, Lab. Physics, p. 67 (†5.0) or Ps14, Electrical Measurement and Testing, p. 67 (†5.0) or Ch14, Qualitative Analysis, p. 69 (†5) or B113, Geology, p. 73	2.5	Gm3b, German, p. 58 (2.5) or Rm3b, French, p. 56 (2.5) or Me9, Machine Design, p. 81 or Ms13, Adv. Integ. Calculus, p. 65 (2.5) or Ms15, Differential Equations, p. 65 (2.5) or Ps7, Advanced Optics, p. 66, (2.5) or Ps10, Lab. Physics, p. 67 (†5.0) Ps17, Electrochemistry, p. 68, (2.5) or Ch16, Quantitative Analysis, p. 70, (†5.0)	3.5
Ps11, Electrical Measurement and Testing, p. 67	†4.0	Ce7, Mechanics, p. 79	5.0
Ce6, Mechanics, p. 78	5.0	Me4, Machine Work, p. 81	†5.0
Me4, Machine Work, p. 81	†4.0	Ee2, Electricity and Magnetism, and Dynamo Design, p. 83	2.5
Ee1, Electricity, and Magnetism, p. 83	2.5		

Senior Year.

Cv13, Political Economy, p. 63	2.5	Cv14, Political Economy, p. 63	2.5
Cv15, Constitutional Law and History, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Me11, Heat and Steam, p. 81 or Mathematics or Physics as in junior year or Gm4a, German, p. 58 or Rm4a, French, p. 56	2.5	Me14, Steam Engine, p. 82 or Mathematics, or Physics, as in junior year (2.5) or Gm4b, German, p. 58 (2.5) or Rm4b, French, p. 57 (2.5)	3.5
Ee3, Electrical Machinery, p. 83,	2.5	Ee4, Alternating Current Machinery, p. 83, 1st 9 w.	5.0
Ee5, Design of Direct Current Machines, p. 83	†5.0	Ee6, Design of Alternating Current Machines, p. 84, 1st 9 w.	†5.0
Ee7, Lab. Work, Direct Currents, p. 84	†7.0	Ee8, Laboratory Work, p. 84, 1st 9 w.	†5.0
Ee13, Alternating Currents, p. 84	2.5	Ee14, Electrical Engineering, p. 85, 2nd 9 w.	2.5
		Ee16, Thesis Work, p. 85, 2nd 9 w.	†15.0

The Mining Engineering Course

At a recent meeting of the board of trustees it was voted to establish a department of mining engineering. The course of study for the first two years will be identical with that in civil engineering, except that during the second year class and laboratory work in chemistry will take the place of the courses in mechanical drawing, descriptive geometry, and surveying. It is expected that more specific and advanced instruction in this new department will be provided for at an early date.

WINGATE HALL

COLLEGE OF PHARMACY

The College of Pharmacy comprises:

The Pharmacy Course
The Short Course in Pharmacy

The Pharmacy Course

This course is offered in response to a demand for a thorough training, both general and technical, for those who are to become pharmacists. It aims to combine a broad general culture and a thorough preparation along its special lines, with the design of affording both the intellectual development necessary for the well rounded professional or business man, and the necessary technical training. To this end, it includes the same instruction in modern languages, civics, and the sciences, as is offered in other college courses.

Those who intend to fit themselves for pharmaceutical work are urged to consider carefully the superior advantages of this course. The growing importance of the biological, sanitary, and medical sciences, and the pharmacist's relation to them, makes it increasingly necessary to his success that he be not only a well trained man in the technical branches, but an educated man in the broadest sense.

Instruction in pharmaceutical studies is given by means of lectures, recitations, and tests, supplemented by work in the laboratories of chemistry and pharmacy. It embraces qualitative, quantitative, and volumetric analysis, toxicology, bacteriology, prescriptions, the preparation of pharmaceutical compounds, and original investigations.

The library contains valuable reference literature in chemistry and pharmacy, and the best chemical and pharmaceutical journals.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, he receives the degree of Master of Science.

STUDIES OF THE PHARMACY COURSE

For Declamations and Themes see page 59; for Military Science see page 88.

FRESHMAN YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Gm1, German, p. 57 or Gm2a, German, p. 58 (2.5)	4.0	Gm2, German, p. 58 or Gm2b, German, p. 58 (2.5)	4.0
Eh3, Rhetoric, p. 59	2.5	Eh4, Rhetoric, p. 59	2.5
Ms2, Algebra, p. 63	2.0	Ms3, Algebra, p. 63	2.5
Ms4, Trigonometry, p. 64	3.0	Ms1, Solid Geometry, p. 63 or Ms19, Sph. Trigonometry, p. 65	2.5
Ch1, General Chemistry, p. 68	2.5	Ch2, General Chemistry, p. 68	2.5
Ch3, Laboratory Chemistry, p. 68	†2.0	Ch4, Laboratory Chemistry, p.68	†2.0
Dr1, Drawing, p. 85	†5.0	Ht1, General Botany, p. 76	†5.0
Dr2, Math. Drawing, p. 85, 8 w.	†3.0	Dr2, Math. Drawing, p. 85, 5 w.	†3.0

SOPHOMORE YEAR.

Gm3a, German, p 58	2.5	Gm3b, German, p. 58	2.5
Rm1, French, p. 56 or Rm2a, French, p. 56 (2.5)	4.0	Rm2, French, p. 56 or Rm2b, French, p. 56 (2.5)	4.0
Ps12, General Physics, p. 67	2.5	Ps13, General Physics, p. 67	2.5
Ch5, Inorganic Chemistry, p. 68	2.5	Ps5, Laboratory Physics, p. 66	†5.0
Ch14, Qualitative Analysis, p. 69	†10.0	Ch6, Inorganic Chemistry, p. 69	2.5
Bl1, General Biology, p. 71	2.5	Ch15, Qualitative Analysis, p. 70	†7.0
Bl2, Laboratory Biology, p. 72	†5.0	Ag13, Bacteriology, p. 75, 9 w. Ht8, Histology of Plants, p. 77 9 w.	†5.0

JUNIOR YEAR.

Gm4a, German, p. 58 or Rm3a, French, p. 56	2.5	Ch8, Organic Chemistry, p. 69	2.5
Pl1, Psychology, p. 60	2.5	Ch21, Toxicology and Urinalysis, p. 70	†2.0
Ch7, Organic Chemistry, p. 69	2.5	Ag2, Biological Chemistry, p. 73.	5.0
Ch10, Analytical Methods, p. 69	1.0	Bl9, Physiology, p. 72	2.5
Ch16, Quantitative Analysis, p.70.	†10.0	Bl10, Laboratory Physiology, p.73	†5.0
Ag1, Biological Chemistry, p. 73.	2.5	Pm6, Organic Pharmacognosy, p. 97	4.0
Pm5, Inorganic Pharmacognosy, p. 87	2.5		

SENIOR YEAR.

Cv13, Political Economy, p. 63	2.5	Pl2, Logic, p. 61, or Cv14, Political Economy, p. 63	2.5
Cv15, Constitutional Law and History, p. 63	2.5	Cv16, Constitutional Law and History, p. 63	2.5
Pm2, Pharmacy, p. 86	5.0	Ag15, Laboratory Bacteriology, p. 76, 9 w	†10.0
Pm3, Laboratory Pharmacy, p.86.	†12.0	Pm4, Pharmacopœia, p. 87	5.0
Pm7, Materia Medica, p. 87	2.5	Pm8, Thesis Work, p. 87, 9 w	†12.0
		Pm11, Prescriptions, p. 88	2.5

The Short Course in Pharmacy

This course, of two years, is designed for those who, for lack of time or for other reasons, are unable to take the course of four years. The more general educational studies of the full course are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The course corresponds, in general, to the usual full course of the pharmacy college. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores during term time.

Students who complete this course in a satisfactory manner receive the degree of Pharmaceutical Chemist.

STUDIES OF THE SHORT COURSE IN PHARMACY

For Military Science see page 88.

First Year.

Fall Term—18 weeks.	Hours.	Spring Term—18 weeks.	Hours.
Ps3, Elemetary Physics, p. 66....	2.5	Ps4, Elementary Physics, p. 66..	2.0
Ch1, General Chemistry, p. 68 ...	2.5	Ps6, Laboratory Physics, p. 66...	†1.0
Ch14, Qualitative Analysis, p., 69	†12.0	Ch2, General Chemistry, p. 68 ...	2.5
Pm1, Pharmacy, p. 86	5.0	Ch15, Qualitative Analysis, p. 70, 9 w.	†14.0
Pm5, Inorganic Pharmacognosy, p. 87....	2.5	Ch19, Volumetric Analysis, p. 70, 9 w.	
		Ht1, General Botany, p. 76	†5.0
		Pm6, Organic Pharmacog., p. 87	4.0

Second Year.

Ch7, Organic Chemistry, p. 69 ...	2.5	Ch8, Organic Chemistry, p. 69 ...	2.5
Ag1, Biological Chemistry, p. 73,	2.5	Ch21, Toxicology and Urinalysis, p. 70.....	†2.0
Pm2, Pharmacy, p. 86.....	5.0	Ag13, Bacteriology, p. 75, 9 w.	†5.0
Pm3, Laboratory Pharmacy, p.68,	†2.0	Ht8, Hist. of Plants, p. 77, 9 w.	
Pm7, Materia Medica, p. 87.....	2.5	Pm4, Pharmacopœia and Prescriptions, p. 87.....	5.0
		Pm9, Pharmacy Readings, p. 87.	†5.0
		Pm10, Laboratory Pharmacy, p.87	†5.0
		Pm11, Prescriptions, p. 88.....	2.5

SCHOOL OF LAW

Faculty

GEORGE EMORY FELLOWS, PH. D.,
President of the University.

GEORGE ENOS GARDNER, M. A.,
Dean and Professor of Law.

ALLEN ELLINGTON ROGERS, M. A.,
Professor of Constitutional Law.

WILLIAM EMANUEL WALZ, M. A., LL. B.,
Professor of Law.

FOREST JOHN MARTIN, LL. B.,
Instructor in Law.

HUGO CLARK, C. E.,
Instructor in Law.

WILLIAM ROBINSON PATTANGALL, M. S.,
Instructor in Law.

EDGAR MYRICK SIMPSON, B. A.,
Instructor in Law.

CHARLES HAMLIN, M. A.,
Lecturer on Bankruptcy.

LUCILIUS ALONZO EMERY, LL. D.,
Lecturer on Roman Law.

ANDREW PETERS WISWELL, B. A.,
Lecturer on Evidence.

LOUIS CARVER SOUTHARD, M. S.,
Lecturer on Medical Jurisprudence.

RALPH KNEELAND JONES, B. S.,
Librarian.

The School of Law was opened to students in 1898. It occupies rooms in the Exchange Building, at the corner of State and Exchange streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The law library contains about 3,000 volumes, including the report of the Supreme Court of the United States, Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Ohio, and the Court of Appeals of New York, the New York Common Law and Chancery Reports, the American Decisions, American Reports, American State Reports, the Complete Reporter System, the Lawyers Reports Annotated, all the Law Encyclopaedias, and a considerable number of text-books.

Admission

Graduates of any college or satisfactory preparatory school are admitted to the school as candidates for the degree of Bachelor of Laws, without examination. Other applicants must give satisfactory evidence of the necessary educational qualifications for the pursuit of the required course of study. These will be fixed in each case, on consideration of its merits.

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students from other law schools of good standing are admitted to classes in this school corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the course.

Members of the bar of any state are admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws.

Methods of Instruction

The school is not committed exclusively to any one method of instruction, and recognizes the great value of lectures by able men, and the profit to be found in the use of standard text-books, but the greatest stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is

believed that through the case the student can best come at the controlling principles of the law, and that in no other way can he get so vital a comprehension of them. "Through the case to the principle," may perhaps adequately indicate the standpoint of the school in the matter of method.

Particular stress is placed upon the Practice Court, which is held once a week as a part of the work of the school, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs, summarizing the points involved and the authorities cited, are submitted to the presiding judge. During the present year members of the Penobscot Bar have served in the capacity of judge, and it is expected that their services may be secured hereafter. Jury trials are frequently held, the records of recent cases actually tried before the Supreme Court sitting at *nisi prius* being used for that purpose.

The aim and spirit of the school are eminently practical, the purpose being to equip men for the every day duties of the practicing attorney.

Course of Study

The course of study covers three years, in accordance with the requirements for admission to the bar in the State of Maine. The school year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively.

Expenses

The annual tuition fee is $60. The graduation fee is $10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at a price ranging from $3 to $7 a week. In other parts of the city lower rates may be obtained. It is believed that expenses in this department, as well as in other departments of the University, are lower than in any other New England college.

Degrees

At the completion of the three years course, the degree of Bachelor of Laws is conferred. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, the degree of Master of Laws is granted.

COURSES OF INSTRUCTION

Lw 1. CONTRACTS.—The text-book is Keener's Cases on Contract. *Four hours a week.* Fall term. MR. PATTANGALL.

Lw 2. CONTRACTS.—A continuation of course 1. *Three hours a week.* Winter Term. MR. PATTANGALL.

Lw 3. CONTRACTS.—A continuation of course 2. *Two hours a week.* Spring term. MR. PATTANGALL.

Lw 4. TORTS.—The text-book is Ames and Smith's Cases on Torts.
Four hours a week. Fall term. PROFESSOR WALZ.

Lw 5. TORTS.—A continuation of course 4.
Three hours a week. Winter term. PROFESSOR WALZ.

Lw 6. TORTS.—A continuation of course 5.
Two hours a week. Spring term. PROFESSOR WALZ.

Lw 7. HISTORY AND ELEMENTS OF LAW.—Lectures.
One hour a week. Fall term. PROFESSOR ROGERS.

Lw 8. REAL PROPERTY.—The text-book is Tiedeman on Real Property.
Four hours a week. Fall term. PROFESSOR GARDNER.

Lw 9. REAL PROPERTY.—A continuation of course 8.
Three hours a week. Winter term. PROFESSOR GARDNER.

Lw 10. AGENCY.—The text-book is Huffcut's Cases on Agency.
Three hours a week. Spring term. PROFESSOR WALZ.

Lw 11. Bankruptcy.—Lectures.
Two hours a week. Winter term. Mr. Hamlin.

Lw 12. Criminal Law.—The text-book is Beale's Cases on

Four hours a week. Spring term. Mr. Simpson.

Lw 13. Common Law Pleading.—Lectures.
Two hours a week. Winter term. Mr. Martin.

Lw 14. Common Law Pleading.—A continuation of course 13.
One hour a week. Spring term. Mr. Martin.

Lw 15. Equity.—The text-books are Bispham on Equity Jurisprudence, and Shepard's Illustrative Cases in Equity. *Four hours a week.* Fall term. Professor Walz.

Lw 16. Equity Jurisprudence.—A continuation of course 15.
Four hours a week. Winter term. Professor Walz.

Lw 17. Evidence.—The text-book is Thayer's Cases on Evidence.
Four hours a week. Fall term. Professor Gardner.

Lw 18. Evidence.—A continuation of course 17.
Four hours a week. Winter term. Professor Gardner.

Lw 19. Private Corporations.—The text-book is Keener's Cases on Private Corporations.
Four hours a week. Fall term. Professor Gardner.

Lw 20. Private Corporations.—A continuation of course 19.
Three hours a week. Winter term. Professor Gardner.

Lw 21. Municipal Corporations.—The text-book is Smith's Cases on Municipal Corporations.
Three hours a week. Winter term. Professor Walz.

Lw 22. Real Property.—The text-book is Finch's Cases on the Law of Property in Law.
Four hours a week. Spring term. Professor Gardner.

Lw 23. Constitutional Law.—The text-book is Smith's Cases.
Three hours a week. Winter term. Professor Rogers.

Lw 24. Domestic Relations.—The text-book is Elwell's Leading Cases.
Three hours a week. Fall term. Mr. Simpson.

Lw 25. Wills and Administration.—The text-book is Chaplin's Cases on Wills.
Four hours a week. Spring term. Professor Gardner.

Lw 26. Partnership.—The text-book is Ames's Cases on Partnership.
Four hours a week. Spring term. Professor Walz.

Lw 27. Conflict of Laws.—Text-book, Dwyer's Cases on Conflict of Laws.
Three hours a week. Fall term. Professor Walz.

Lw 28. Equity Pleading.—*Lectures.*
Two hours a week. Spring term. Mr. Clark.

Lw 29. Jurisdiction of Federal Courts.—Lectures.
One hour a week. Spring term. Professor Gardner.

Lw 30. Roman Law.—Lectures.
One hour a week. Spring term. Judge Emery.

Lw 31. Evidence.—Lectures.
Time not fixed. Judge Wiswell.

Lw 32. Medical Jurisprudence.—Lectures.
Two hours a fortnight. Winter term. Mr. Southard.

Lw 33. Medical Jurisprudence.—A continuation of course 32.
Two hours a fortnight. Spring term. Mr. Southard.

COMMENCEMENT

The Commencement exercises of 1901 were as follows:—

Saturday, June 8: Junior Exhibition.

Sunday, June 9: Baccalaureate Address, by Dr. W. H. Jordan, Geneva, N. Y.

Monday, June 10: College Convocation, including reports of departments and student enterprises, and the awarding of prizes; Class Day Exercises; Reception by the University Guild.

Tuesday, June 11: Inspection of Alumni Hall; Receptions by the Fraternities; President's Reception.

Wednesday, June 12: Commencement Exercises and Presentation of Alumni Hall; Commencement Dinner; Meeting of the Alumni Association; Commencement Concert.

CERTIFICATES AND DEGREES

The Degree of Pharmaceutical Chemist was conferred upon:

Richard Henry Berry, Montville.

George Pearson Larrabee (class of 1900), Presque Isle.

John Foy Sanford, Lewiston.

The Bachelor's degree was conferred upon:

Charles William Bartlett, B. S. in Electrical Engineering, North New Portland.

Mark Jonathan Bartlett, B. Ph., Montville.

Wales Rogers Bartlett, B. A., Center Montville.

John Harold Bixby, B. S. in Civil Engineering, Anson.

Oscar Merrill Bixby, B. S. in Mechanical Engineering, Anson.

William Harris Boardman, B. S. in Civil Engineering, Calais.

Fred Hammond Hanson Bogart, B. S. in Mechanical Engineering, and B. S. in Electrical Engineering, Chester, Conn.

Thomas Buck, B. S. in Science, Orland.

Lewis Robinson Cary, B. S. in Agriculture, Bowdoinham.
Arthur Leroy Cobb, B. S. in Electrical Engineering, South Vassalboro.
Charles Elmer Crosby, B. S. in Agriculture, Albion.
Fred Merrill Davis, B. S. in Electrical Engineering, Lewiston.
George Harold Davis, B. S. in Electrical Engineering, Auburn.
Benjamin Franklin Faunce, B. S. in Mechanical Engineering, Norway.
Elsie Eunice Fitzgerald, B. Ph., Old Town.
Harold Morrill Folsom, B. A., Old Town.
Gertrude Lee Fraser, B. Ph., Old Town.
Joseph Edward French, B. S. in Electrical Engineering, So. Chesterville.
George Estyn Goodwin, B. S. in Civil Engineering, Gorham, N. H.
Emily Hamlin, B. S., Orono.
Clifford Dawes Harvey, B. S. in Chemistry, Lewiston.
LeRoy Harris Harvey, B. S., Orono.
Ernest Judson Howe, B. S. in Civil Engineering, South Lancaster, Mass.
Henry Perez Hoyt, B. S. in Civil Engineering, Fort Fairfield.
Percy Raymond Keller, B. S. in Mechanical Engineering, West Rockport.
Herbert Henry Leonard, B. S. in Mechanical Engineering, Orono.
Frank Holt Lowell, B. S. in Mechanical Engineering, No. Penobscot.
Bertrand Clifford Martin, B. S. in Civil Engineering, Ft. Fairfield.
Fred Lewis Martin, B. S. in Electrical Engineering, Franklin.
Maurice Barnaby Merrill, B. A., Stillwater.
Charles Augustus Mitchell, B. S. in Mechanical Engineering, West Newfield.
Harry Charles Pritham, B. S. in Chemistry, Freeport.
Alson Haven Robinson, B. S., Orono.
Mowry Ross, B. S. in Electrical Engineering, West Woodstock, Conn.
Samuel Day Thompson, B. A., Bangor.
Lewis Goodrich Varney, B. S. in Civil Engineering, Windham Center.

Thomas Hale Ward, B. S. in Electrical Engineering, Fryeburg.
Ernest Lauren Watson, B. S. in Mechanical Engineering, Brunswick.
Frank Erwin Watts, B. S. in Electrical Engineering, West Falmouth.
Stephen Edward Woodbury, B. S. in Mechanical Engineering, and B. S. in Electrical Engineering, Beverly, Mass.
Ralph Geddes Wormell, B. S. in Mechanical Engineering, Waterville.

The degree of Bachelor of Laws was conferred upon:
Ernest Clifford Butler, Skowhegan.
Benjamin Franklin Butterfield, Danforth.
Nathan Grant Foster, Weld.
Frank Plumstead, Wiscasset.

The degree of Master of Science, upon the presentation of satisfactory theses, and examination on prescribed courses of advanced study, was conferred upon:
Oliver Otis Stover, B. S. (1899).
James Arthur Hayes, B. S. (1900).
Frank Henry Mitchell, B. S. (1900).
Percy Leroy Ricker, B. S. (1900).

The degree of Civil Engineer, upon presentation of satisfactory theses, and proof of professional work extending over a period of not less than three years, was conferred upon:
Wendell Wyse Chase, B. C. E. (1895).
James William Martin, B. C. E. (1895).
William Thomas Brastow, B. C. E. (1897).
Llewellyn Nathaniel Edwards, B. C. E. (1898).
Fred William Sawtelle, B. C. E. (1898).

The degree of Electrical Engineer, upon presentation of satisfactory theses and proof of professional work extending over a period of not less than three years, was conferred upon:
Albion Dana Topliff Libby, B. M. E. (1898).
Ray Herbert Manson, B. M. E. (1898).

The degree of Graduate in Pharmacy, upon satisfactory proof of professional work was conferred upon:
William Bryant Webster, (1899).

The various prizes were awarded last year as follows:

The Kidder Scholarship, to Amy Ines Maxfield, Sandy Point.

The Junior Exhibition Prize, to Henry Ernest Cole, South Portland.

The Sophomore Exhibition Prize, to Thomas Edward Leary, East Hampden.

The Libby Prize, to Leroy Harris Harvey, Orono.

The Walter Balentine Prize, to Arthur Brookhouse Foster, Beverly, Mass.

The Franklin Danforth Prize, to Lewis Robinson Cary, Bowdoinham.

APPOINTMENTS

Speakers at Commencement, June, 1901

Ernest Clifford Butler, Skowhegan; George Harold Davis, Auburn; Harold Morrill Folsom, Oldtown; Nathan Grant Foster, Weld; Harold Morrill Folsom, Oldtown; Leroy Harris Harvey, Orono; Maurice Barnaby Merrill, Stillwater.

Speakers at the Junior Exhibition, June, 1901

Edith Mae Bussell, Oldtown; Henry Ernest Cole, South Portland; Wesley Clarendon Elliott, Patten; Henry Carter French, Rumford Center; Patrick Edward McCarthy, Lewiston; Herbert Willis Sewell, Wilton.

Speakers at the Sophomore Prize Declamation Contest, December, 1900.

Archie Ray Benner, Waldoboro; Geneva Blaisdell, Fort Fairfield; Fred Collins, Bar Harbor; Samuel Joshua Foster, Bingham; John Heddle Hilliard, Oldtown; Thomas Edward Leary, East Hampden; Amy Ines Maxfield, Sandy Point; Guy Osman Small, Kingfield (excused).

Members of the Phi Kappa Phi

Wales Rogers Bartlett, Center Montville; Oscar Merrill Bixby, Anson; Fred Hammond Hanson Bogart, Chester, Conn.; Thomas Buck, Orland; Ernest Clifford Butler, Skowhegan; George Harold Davis, Auburn; Nathan Grant Foster, Weld; Gertrude Lee Fraser, Oldtown; George Estyn Goodwin, Gorham, N. H.; Clifford Dawes Harvey, Lewiston; Leroy Harris Harvey, Orono; Herbert Henry Leonard, Orono.

Students Receiving General Honors

Mark Jonathan Bartlett, Montville; Wales Rogers Bartlett, Center Montville; Fred Hammond Hanson Bogart, Chester, Conn.; Oscar Merrill Bixby, Anson; Thomas Buck, Orland; George Harold Davis, Auburn; Elsie Eunice Fitzgerald, Oldtown; Gertrude Lee Fraser, Oldtown; George Estyn Goodwin, Gorham, N. H.; Clifford Dawes Harvey, Lewiston; Leroy Harris Harvey, Orono; Herbert Henry Leonard, Orono.

Students Receiving Special Honors

SENIORS

Mark Jonathan Bartlett, Montville, Economics.
Thomas Buck, Orland, Mathematics (twice) and Physics.
Lewis Robinson Cary, Bowdoinham, Biology.
George Harold Davis, Auburn, Physics.
Benjamin Franklin Faunce, Norway, Physics.
Clifford Dawes Harvey, Lewiston, Physics.
Leroy Harris Harvey, Orono, Biology (twice).

JUNIORS

Henry Wilmot Chadbourne, Mattawamkeag, Mathematics.
Henry Ernest Cole, South Portland, Mathematics.
Walter Hampton Eldridge, Bucksport, Mathematics.
Wesley Clarendon Elliott, Patten, Physics.
Arthur Brookhouse Foster, Beverly, Mass., Chemistry.
Henry Carter French, Rumford Center, Physics.
Horace Parlin Hamlin, Orono, Physics.
Marie Cecilia Rice, Bangor, Physics.

CATALOGUE OF STUDENTS

GRADUATE STUDENTS

Beck, William Porter, B. S..	Bethel, Ohio,	Waterville.
Grover, Archer Lewis, B. M. E.,	Bethel,	Mrs. Graves.
Holley, Clifford Dyer, B. S.,	Farmington,	Mrs. Hayes.
Morse, Robert Brooks, B. A.,	Baltimore, Md.,	Orono House.
Poucher, George Edward, B. S.,	Greensburg, Ind.,	Mrs. Graves.

SENIORS

Bachelder, Arthur Willis,	North Sebago,	311 Oak Hall.
Barrows, William Edward, Jr.,	Augusta,	B. Θ. Π House.
Bartlett, Enoch Joseph,	Monroe,	207 Oak Hall.
Boland, Marion Genevieve,	Worcester, Mass.,	Mt. Vernon [House.
Buck, Henry Alfred,	Bucksport,	J. P. Spearen.
Bussell, Edith Mae,	Oldtown,	Oldtown.
Butman, James Warren,	Readfield,	A. T. Ω. House.
Carr, Harold Malcolm,	Sangerville,	K. Σ. House.
Chadbourne, Henry Wilmott,	Mattawamkeag,	207 Oak Hall.
Clark, Samuel,	Waterville,	A. T. Ω. House.
Chase, Nathan Ajalon,	South Paris,	H. Perkins.
Cole, Henry Ernest,	South Portland,	311 Oak Hall.
Davis, Alfred Ricker,	Auburn,	K. Σ. House.
Davis, Samuel Prince,	Portland,	B. Θ. Π. House.
Delano, Edward Warren,	Abbot Village,	B. Θ. Π. House.
Duren, Harry Elwood,	Richmond,	201 Oak Hall.
Durgan, George Washington, Jr.,	Sherman Mills,	209 Oak Hall.
Eldridge, Walter Hampton,	Bucksport,	101 Oak Hall.
Elliott, Wesley Clarendon,	Patten,	111 Oak Hall.
Farrington, Herbert Oscar,	Portland,	T. Simmons.
Fessenden, Lothrop Edwin,	Bridgton,	Mrs. C. A. Marsh.
Foster, Arthur Brookhouse,	Beverly, Mass.,	Park St.

French, Henry Carter,	Rumford Center,	302 Oak Hall.
Gilbert, Eugene Clarence,	Orono,	T. Gilbert.
Hamilton, Andrew George,	Orono,	Myrtle St.
Hamlin, Horace Parlin,	Orono,	Main St.
Hennessy, Harold Stewart,	Bangor,	B. Θ. Π. House.
Holmes, Fred Eugene,	East Machias,	202 Oak Hall.
Johnson, Elbridge Augustus,	Portland,	Mrs. A. Cowan.
Kallom, Frank Winthrop,	South Berlin, Mass.,	A. T. Ω. [House.
Kelly, Burchard Valentine,	Centerville, Mass.,	Orono House.
Kneeland, Henry Wilton,	Searsport,	302 Oak Hall.
Knight, Perley Charles,	South Gorham,	O. T. Goodridge.
Knowles, Lida May,	Bangor,	Mt. Vernon House.
Lowe, Sumner Sturdivant,	Cumberland,	Mrs. A. Cowan.
Lyon, Alpheus Crosby,	Bangor,	Φ. Γ. Δ. House.
McCarthy, Patrick Edward,	Lewiston,	201 Oak Hall.
Mansfield, Harold Wilder,	Union,	105 Oak Hall.
Margesson, Charles William,	Bangor,	Φ. Γ. Δ. House.
Mosher, Percival Hildreth,	Pleasantdale,	208 Oak Hall.
Pease, Irving,	Bean's Corner,	307 Oak Hall.
Peck, Luther,	Monson, Mass.,	201 Oak Hall.
Pressey, Frank Ethelbert,	Bangor,	102 Oak Hall.
Rackliffe, Clinton Nathan,	Easton,	312 Oak Hall.
Rice, Marie Cecilia,	Bangor,	Mt. Vernon House.
Ross, Edwin Bishop,	Bangor,	B. Θ. Π. House.
Russell, Roy Elvert,	Livermore,	302 Oak Hall.
Sewell, Herbert Willis,	Wilton,	Φ. Γ. Δ. House.
Silver, Arthur Elmer,	Silver's Mills,	312 Oak Hall.
Stephens, Charles Walter	Oldtown,	Oldtown.
Stilphen, Charles Augustus,	Gardiner,	Mrs. Good.
Thombs, William Brackett,	Gorham,	A. T. Ω. House.
True, Edwin Stanley,	Portland,	B. Θ. Π. House.
Warren, John Clifford,	Westbrook,	K .Σ. House.
Watson, Alvin Morrison,	Portland,	K. Σ. House.
Wheeler, Allen Francis,	Brunswick,	A. T. Ω. House.
Whittier, Ralph,	Bangor,	A. T. Ω. House.

JUNIORS

Baker, Ernest Linwood,	Portland,	301 Oak Hall.
Benner, Archie Ray,	Waldoboro,	G. E. Thompson.
Blaisdell, Geneva,	Fort Fairfield,	Mt. Vernon [House.
Blaisdell, Melvin Merle,	Fort Fairfield,	102 Oak Hall.
Carr, Cleora May,	Oldtown,	Oldtown.
Chandler, Robert Flint,	New Gloucester,	Φ. Γ. Δ. House.
Chesley, Lloyd Almond,	Oldtown,	K. Σ. House.
Coffin, Leroy Melville,	Freeport,	Mrs. L. P. Harris.
Cole, Winfield Lee,	Biddeford,	A. T. Ω. House.
Collins, Fred,	Bar Harbor,	K. Σ. House.
Conner, Ralph Melvin,	East Wilton,	101 Oak Hall.
Cooper, Ralph Leonard,	Belfast,	A. T. Ω. House.
Crabtree, Leroy Brown,	Hancock,	K. Σ. House.
Crocker, Henry Kennedy,	Rockland,	B. Θ. Π. House.
Davis, Rodney Clinton,	Lewiston,	203 Oak Hall.
Dinsmore, Sanford Crosby,	Dover,	B. Θ. Π. House.
Dorticos, Carlos,	Woodfords,	K. Σ. House.
Douglass, Frank Libby,	West Gorham,	Mayo's Block.
Ellstrom, Victor Edwin,	Fitchburg, Mass.,	204 Oak Hall.
Everett, Chester Steele,	Attleboro, Mass.,	303 Oak Hall.
Foster, Samuel Joshua,	Bingham,	K. Σ. House.
Freeman, George Leonard,	West Gray,	K. Σ. House.
French, Harold Francis,	Glenburn,	O. T. Goodridge.
Goodridge, Oren Leslie,	Orono,	Main St.
Goodwin, Burton Woodbury,	Berry Mills,	Φ. Γ. Δ. House.
Graves, Sherley Preston,	Northeast Harbor,	H. W. Finn.
Harris, Philip Howard,	Portland,	B. Θ. Π. House.
Hartford, Edward Goodnow,	Calais,	H. W. Finn.
Hilliard, John Heddle,	Oldtown,	Φ. Γ. Δ. House.
Hinchliffe, Henry John,	Worcester, Mass.,	Φ.Γ.Δ.House.
Hinckley, Frances Augusta,	Oldtown,	Oldtown.
Kittredge, Claude Abbott,	Farmington,	A. Γ. Ω. House.
Leary, Thomas Edward,	East Hampden,	303 Oak Hall.
Lord, Cecil Arthur,	Bar Harbor,	Middle Street.
Loud, Warren Cornelius,	Caribou,	206 Oak Hall.
McCready, John Hollis,	Houlton,	A. T. Ω. House.

McCullough, Frank,	Lynn, Mass.,	B. Θ. Π. House.
Maxfield, Amy Ines,	Sandypoint, Mt.	Vernon House.
Mullaney, Roderick Edward.	Bangor,	A. T. Ω. House.
Patrick, Stephen Edmund,	Gorham,	Dr. Whitcomb.
Porter, Ernest Albee,	Eustis,	K. Σ. House.
Rogers, Herbert Kemp,	Wellfleet, Mass.,	F. A. Abbott.
Shaw, Scott Parker,	North Gorham,	110 Oak Hall.
Sheahan, Harold Vose,	Dennysville,	301 Oak Hall.
Simpson, Paul Dyer.	Sullivan,	B. Θ. Π. House.
Sinclair, Karl Augustus,	Malden, Mass.,	303 Oak Hall.
Small, Silas Gilman,	Lubec,	308 Oak Hall.
Smith, Howard Ausburn,	North Truro, Mass.,	[F. A. Abbott.
Soper, Henry Melville,	Oldtown,	Oldtown.
Stone, Charles Wesley, Jr.,	Milo,	Milford.
Towse, Arthur Roy,	North Lubec,	301 Oak Hall.
Treworgy, Isaac Emery,	Surry,	K. Σ. House.
White, Ralph Henry,	East Machias,	309 Oak Hall.
Whitney, Harvey David,	Auburn,	Φ. Γ. Δ. House.
Wiley, Mellen Cleveland,	Bethel,	203 Oak Hall.

SOPHOMORES

Alden, Carl Howard,	Gorham,	210 Oak Hall.
Averill, Roy Samuel,	Milltown,	210 Oak Hall.
Baker, Robert Clinton,	Taunton, Mass.,	Φ. Γ. Δ. House.
Bassett, Ralph Smith.	Dover,	A. A. Powers.
Bean, Paul Leonard.	Saco,	A. T. Ω. House.
Bearce, Ira M.,	Hebron,	205 Oak Hall.
Berry, Edward Robie,	Lynn, Mass.,	B. Θ. Π. House.
Bradford, Luther Cary,	Turner,	B. Θ. Π. House.
Brann, George Samuel.	Dover,	304 Oak Hall.
Breed, Everett Mark,	Brewer,	Mrs. T. Shatley.
Broadwell, Edwin Sherman,	Cleveland, Ohio,	Prof. J. H. [Huddilston.
Brown, Ernest Carroll,	Gorham,	Mrs. James Walton.
Brown, Horace A.,	Bradley,	Bradley.
Buker, Edson Bayard,	Brownville,	305 Oak Hall.
Case, Albert Deering,	Lynn, Mass.,	A. T. Ω. House.

Chaplin, Carroll Sherman,	Portland,	Φ. Γ. Δ. House.
Chase, Clifford Gray,	Baring,	308 Oak Hall.
Clifford, Edward Clinton,	West Falmouth,	Φ. Γ. Δ. House.
Colomy, Edward Wilmot,	Bangor,	Bangor.
Copeland, Lennie Phoebe,	Bangor,	Bangor.
Crowley, Elmer Bishop,	Indian River,	208 Oak Hall.
Davenport, Arthur Edward,	E. Brimfield, Mass.,	306 Oak Hall.
Dinsmore, Ernest Leroy,	Whiting,	308 Oak Hall.
Dorticos, Phillip,	Woodfords,	K. Σ. House.
Farwell, Harry Hancock,	Boston, Mass.,	310 Oak Hall.
Fifield, Fred Victor,	East Eddington,	310 Oak Hall.
Flynt, Roy Horton,	Augusta,	B. Θ. Π. House.
Foubert, Charles Leon,	Danbury, Conn.	Main St.
French, George Augustus,	Portland,	F. A. Abbott.
Gage, Arthur Willard,	Dennisport, Mass.,	F. A. Abbott.
Giles, Clyde Irving,	Skowhegan,	Orono House.
Gill, William Everett,	Camden,	Φ. Γ. Δ. House.
Gregory, Herbert Stanley,	Elmira, N. Y.,	Mrs. James Walton.
Gulliver, Edward Charles,	Portland,	G. E. Thompson.
Haley, Harry Dennett,	Gardiner,	K. Σ. House.
Haskell, Roger,	Westbrook,	Mrs. E. Webster.
Herbert, Thomas Carroll,	Richmond,	104 Oak Hall.
Holmes, Ernest Randall,	Eastport,	A. T. Ω. House.
Hopkins, Ralph Thomas,	Bangor,	B. Θ. Π. House.
Johnstone, Leslie Ingalls,	Milford,	Milford.
Jones, Vaughn,	Bangor,	K. Σ. House.
Kingsbury, Ralph Waldo Emerson,	So. Brewer,	212 Oak Hall.
Lawrence, Leonard Alexander,	Eastport,	H. Perkins.
Leighton, Clifford Henry,	Addison,	F. A. Abbott.
Libby, Hollis Willard,	Machiasport,	J. P. Spearen.
Little, Leslie Eugene,	Bucksport,	F. A. Abbott.
Livermore, Scott Page,	Lynn, Mass.,	B. Θ. Π House.
McIntire, Walter Draper,	Orange, Mass.,	305 Oak Hall.
Monk, Holman Waldron,	North Buckfield,	110 Oak Hall.
Morse, Frank Leander Staples,	Thomaston,	J. P. Spearen.
Olivenbaum, John Emanuel,	Jemtland,	Φ. Γ. Δ. House.

Paine, Allen Thatcher,	Brewster, Mass.,	109 Oak Hall.
Parker, Edward Alton,	Skowhegan,	K. Σ. House.
Pearson, Ralph Howard,	Guilford,	304 Oak Hall.
Perkins, Connor Arthur,	Bucksport,	K. Σ. House.
Phinney, Alverdo Linwood,	S. Portland,	Fitzgerald House.
Porter, Karl Byron,	Oldtown,	A. T. Ω. House.
Quimby, John Herman,	Goodale's Corner,	107 Oak Hall.
Richardson, Roy Henry,	Norwell, Mass.,	Mrs. T. Shatney.
Ricker, William Jewett,	Turner,	110 Oak Hall.
Sampson, Charles Henry,	Gorham,	O. T. Goodrich.
Sawyer, James Herbert,	Saco,	A. T. Ω. House.
Scott, William Erwin,	Dexter,	Φ. Γ. Δ. House.
Small, Alvah Randall,	South Portland,	105 Oak Hall.
Small, Lottie Luella,	Auburn,	Mt. Vernon House.
Smith, Elmer Garfield,	Portland,	K. Σ. House.
Smith, Leroy Clifton,	East Exeter,	Mrs. A. A. Walton.
Snell, Roy Martin,	Lagrange,	211 Oak Hall.
Soderstrom, Godfrey Leonard,	Hartford, Conn.,	Φ. Γ. Δ. House.
Talbot, Fred William,	Andover,	207 Oak Hall.
Talbot, James Rich,	East Machias,	309 Oak Hall.
Taylor, Alec Gladstone,	North Sullivan,	B. Θ. Π. House.
Taylor, Elliott Williams,	Hyannis, Mass.,	F. A. Abbott.
Taylor, Howard Smith,	Bangor,	K. Σ. House.
Taylor, Thomas Francis,	Bangor,	Bangor.
Terry, Orange Fanning,	Bridgeport, Conn.,	B. Θ. Π. [House.
Tucker, John Voden,	Stillwater,	Stillwater.
Turner, Roland Lee,	Boothbay Harbor,	A. T. Ω. [House.
Webber, Mary Frances,	Bangor,	Bangor.
Webster, Francis Howe,	Stockton Springs,	107 Oak Hall.
White, Alphonso,	North Sebago,	Warren Reed.

FRESHMEN

Abbott, Curtis Eames,	Locke'sMills,	Mrs. E. Prescott.
Adams, Harry William,	Portland,	Pine Tree Club.
Allen, George Proctor,	West Gray,	Mrs. W. S. Hurd.
Alton, Ralph Henry,	Lynn, Mass.,	Mrs. E. Prescott.
Ames, Bertram Eugene,	Lynn, Mass.,	Mrs. E. Prescott.
Armstrong, George Otty,	St. John, N. B.,	F. A. Abbott.
Bachelder, Herbert Walter,	East Winthrop,	L. J. Shepard.
Bailey, Charles Lester,	Auburn,	112 Oak Hall.
Balentine, Florence,	Orono,	Mt. Vernon House.
Barton, Murray Fernald,	Bradley,	Bradley.
Beale, Harry Orlando,	North Anson,	Mr. E. Webster.
Bearce, Edwin Freeman,	Auburn,	B. Θ. Π. House.
Beattie, George Wilson,	Oldtown,	Oldtown.
Blaisdell, Harry G.	Bangor,	Bangor.
Blodgett, Ralph Gilbert,	Warren, Mass.,	306 Oak Hall.
Borikoff, George Konstantine,	Sofia, Bulgaria,	J. P. Spearen.
Bowles, Clayton Wass,	Columbia Falls,	Bangor.
Brawn, Harlie Weston,	Bradley,	Bradley.
Brown, Archer Norwood,	Stillwater,	Stillwater.
Burt, Alfred William,	Warren, Mass.,	K. Σ. House
Carle, George Wilmot,	Portland,	Pine Tree Club.
Chalmers, Arthur Sumner,	Bangor,	K. Σ. House.
Chatto, Byron Herbert,	East Surry,	Mrs. E. Smith.
Churchill, Howard Lincoln,	North Buckfield,	J P. Spearen.
Clark, Walter Braden,	Houlton,	H. W. Finn.
Colcord, Lincoln Ross,	Searsport,	K. Σ. House.
Collins, Arthur Winfield,	Fort Fairfield,	Φ. Γ. Δ. House.
Cotton, Ernest L.,	Cumberland Mills,	Mayo's [Block.
Cowan, Benjamin Mosher,	Biddeford,	A. T. Ω. House.
Crowe, Francis Trenholm,	Rumford Falls,	E. Webster.
Crowe, Joseph Wilkinson,	Rumford Falls,	202 Oak Hall.
Dow, Henry Kingman,	Oldtown,	Oldtown.
Drummond, Robert Rutherford,	Bangor,	K. Σ. House.
Fifield, Ralph Herbert,	Dexter,	Φ. Γ. Δ. House.
Flanders, Frank Leroy,	Howard, R. I.,	A. T. Ω. House.

Foss, Howard Colburn,	Farmington,	A. T. Ω. House.
Fraser, Robert Barr,	Oldtown,	Oldtown.
French, Prentiss Edwin,	Turner,	110 Oak Hall.
Fullam, William Edward Peabody,	Portland,	Miss A. T. Emery.
Garland, Clarence Leroy,	Bangor,	Φ. Γ. Δ. House.
Hamlin, Charles Mayo,	Orono,	Main St.
Harlow, Clarence Burr,	Brewer,	Brewer.
Harvey, Bartle Trott,	Orono,	Main St.
Haskell, Ralph Webster,	Westbrook,	E. Webster.
Hayes, Andrew Jenkins,	Oxford,	Mrs. E. Prescott.
Higgins, Roy Edwin,	Brewer,	Φ. Γ. Δ. House.
Hilliard, Edward Knight,	Oldtown,	Oldtown.
Hilton, Horace Alden,	Bangor,	B. Θ. Π. House.
Hodges, Thomas Victor,	Boston,	B. Θ. Π. House.
Huntington, George Kemp,	Lynn, Mass.,	Mrs. Reed.
Huot, Albert Laurence,	Lewiston,	112 Oak Hall.
Kay, Frank Wilbur,	Fiskdale, Mass.,	Pine Tree Club.
Kenrick, William Winslow,	Lynn, Mass.,	Warren Reed.
Kittredge, Clinton Daniel,	Milo,	Φ. Γ. Δ. House.
Lang, Charles Libby,	Harrison,	211 Oak Hall.
Learned, Frank Everett,	Waterville,	A. T. Ω. House.
Longfellow, John Gilman,	Monmouth,	L. J. Shepard.
McClure, James Harvey,	Bangor,	B. Θ. Π. House.
McDermott, John Augustine,	Biddeford,	A. T. Ω. House.
Macfarlane, William James,	Pittsfield,	Mrs. E. Smith.
McGregor, Francis Howard,	Montague,	Pine Tree Club.
McNamara, Francis William,	Oldtown,	Oldtown.
Maddocks, William Samuel,	Oldtown,	Oldtown.
Malcolm, Hiram Battuel,	Gardiner,	Pine Tree Club.
Manson, Walter Blaine,	Gardiner,	209 Oak Hall.
Martin, Lloyd Auther,	Oldtown,	Oldtown.
May, John,	Rockland,	A. T. Ω. House.
Mitchell, Lester Hale,	West Newfield,	Φ. Γ. Δ. House.
Moody, Clare Joseph,	Winterport,	F. A. Abbott.
Moody, Percival Ray,	Biddeford,	A. T. Ω. House.
Mosher, Harry Dexter,	Orono,	College St.
Murphy, Cornelius Parnell,	Oldtown,	Oldtown.
Noddin, Ernest Earle,	North Anson,	E. Webster.

Parker, Charles Henry,	Glenburn,	Main St.
Pennell, Charles Weston,	Gray,	Mrs. W. S. Hurd.
Perkins, Newell Reed,	Skowhegan,	Φ. Γ. Δ. House.
Pooler, John Frederick,	South Brewer,	Φ. Γ. Δ. House.
Powell, Mabel Frances,	Orono,	Forest St.
Prouty, Charles Henry,	Northboro, Mass.,	Pine Tree Club.
Roberts, Alfred Wesley,	Anson,	Mrs. Merriman.
Rogers, Elmer George,	Topsham,	J. P. Spearen.
Rogers, Raymond Francis,	Belfast,	108 Oak Hall.
Rogers, Robert Fisher,	Topsham,	J. P. Spearen.
Sampson, Freeman Marston,	Gorham,	O. T. Goodridge.
Sands, Roy Granville,	Foxcroft,	Miss A. T. Emery.
Scribner, Caleb Warren,	Patten,	111 Oak Hall.
Seabury, Ralph Lowe,	Yarmouth,	L. P. Harris.
Shaw, Walter Jefferson,	Orono,	North Main St.
Silvernail, Elmer Brinkerman,	Daytona, Fla.,	J. P. Spearen.
Skillings, Samuel Boynton,	Westbrook,	Pine Tree Club.
Sleeper, Florence Maude,	Milford,	Milford.
Smith, Carl David,	Revere,	Φ. Γ. Δ. House.
Smith, Dwight Freeman,	Skowhegan,	Φ. Γ. Δ. House.
Sprague, Adelbert Wells,	Bangor,	K. Σ. House.
Standley, Frederick Andrew,	Lynn, Mass.,	Warren Reed.
Stanley, Howard Arthur,	Beverly, Mass.,	Pine Tree Club.
Sweet, Calvin Arthur,	S. Atkinson,	Mrs. Merriman.
Sweetser, Ernest Osgood,	Cumberland Center,	204 Oak Hall.
Taylor, Roy Edmund,	Springvale,	H. W. Finn.
Thatcher, Henry David Thoreau,	Dexter,	B. Θ. Π. House.
Thomas, Burton Merrill,	Portland,	B. Θ. Π. House.
Thomas, Herbert Arthur,	Andover,	108 Oak Hall.
Thomas, Lucian Alvah,	Rockland,	Mrs. W. S. Hurd.
Thomes, Edward Calder,	Portland,	B. Θ. Π. House.
Trafton, Ernest Eugene,	Auburn,	112 Oak Hall.
Trask, Oland Wilbur,	Woodfords,	K. Σ. House.
Walker, Albert Gould,	Thomaston,	J. P. Spearen.
Webster, Robert Adelbert,	Stockton Springs,	107 Oak Hall.
Weick, Frank Bridge,	Springfield,	Mrs. Marsh.
Weld, Moses Waldo,	Oldtown,	Oldtown.

Wentworth, Marion Barry,	Kennebunk Beach,	Mt. Vernon [House.
White, Frank Osmond,	Orono,	Mill St.
Whittier, Arthur Craig,	Farmington,	Pine Tree Club.
Williams, George Seth,	Augusta,	B. Θ. Π. House.
Wood, Alphonso,	Belfast,	110 Oak Hall.
Woods, Carl William,	Knox Station,	212 Oak Hall.
Wyman, Ralph Emery,	Woodfords,	Mrs. T. Shatney.

SHORT PHARMACY COURSE

SOPHOMORES

Burns, Frank Percy,	Westbrook,	204 Oak Hall.
Clarke, Ralph E.,	Freeport,	L. P. Harris.
Tate, Walter Maurice,	South Corinth,	205 Oak Hall.

FRESHMEN

Bell, Carroll Julius,	Whiting,	W. E. French.
Cowan, Ernest Lester,	West Hampden,	104 Oak Hall.
Cowles, Harry Davis,	Athol, Mass.,	J. P. Spearen.
Crocker, James Harry,	Oldtown,	Oldtown.
Curran, E. Earl,	Bangor,	Bangor.
Hoyt, Andy Laurin,	Dover,	E. Webster.
Plummer, Merrill,	Addison,	Orono House.
Quinn, William Francis,	Monson, Mass.,	W. E. French.
Race, James Leroy,	Boothbay,	G. E. Thompson.
Ward, Arthur Stephen,	Fryeburg,	103 Oak Hall.
Wilson, Robert Potter,	Portland,	J. P. Spearen.

SPECIAL STUDENTS

Bailey, Earland Frank,	North Anson,	E. Webster.
Benner, Harry Delano,	Waldoboro,	G. E. Thompson.
Hall, Guy,	South China,	Mrs. Merriman.
Hamilton, Harry L.,	Oldtown,	Oldtown.

Holt, William Douglass,	St. John, N. B.,	A. B. Foster.
Keys, Orman Leroy,	Stetson,	Stillwater.
Lewis, Charles Wesley,	Clinton.	307 Oak Hall.
Mansur, Herman Royal,	Pittsfield,	Mrs. Littlefield.
Merrill, John Nelson, Jr.,	Skowhegan,	Φ. Γ. Δ. House.
Nelson, John D.,	Houlton,	Orono House.
Phipps, William Edwin,	E. N. Yarmouth,	J. P. Spearen.
Puffer, Charles Loring,	Epping,	Α. Τ. Ω. House.
Rastall, Walter Henry,	Chicago, Ill.,	Κ. Σ. House.
Reed, Clarence Edward,	Waldoboro,	G. E. Thompson.
Robbins, Chester Marquis,	Oldtown.	Oldtown.
Small, Guy Osman,	Kingfield,	Mrs. S. Gee.
Thompson, Edwin LeBaron,	Quincy, Mass.,	Miss A. T. [Emery.
Titus, Ray Jewett,	Head Tide,	Mrs. O. Abbott.
Williams, Charles Robert,	Putnam, Conn.,	Mrs. Merriman.
Williams, Mary MacGee,	Bangor,	Bangor.
Winslow, Charles Newell,	Waldoboro,	Mrs. O. Abbott.

SHORT COURSES IN AGRICULTURE

Bowers, Charles William,	Sherman Mills,	Mrs. S. Gee.
Downing, Herbert Plummer,	Ripley,	Mrs. C. Marsh.
Dunn, William Chestor,	Norway,	W. Page.
Gray, Everett Lyndon,	Prospect,	F. A. Abbott.
Low, Frederick Clark,	Brewer,	F. A. Abbott.
Mitchell, Clifton Cross,	Poland,	W. Page.
Newcomb, Oscar Elmer,	Perry,	Mrs. Merriman.
Sally, Everett Ashnum,	Madison,	Mrs. S. Gee.
Sanderson, Arthur Leroy,	East Waterford,	W. Page.
Sylvester, Arthur Clayton,	Mars Hill,	Mrs. S. Gee.
Tolman, Fred Moses,	Carroll,	Κ. Σ. House.
Tubbs, Acaph Carl,	Norway,	W. Page.
Weed, George Lewis,	Winterport,	F. A. Abbott.
Wilkins, Harley Mellen,	Livermore Falls,	Mrs. Merriman.

STUDENTS IN THE SCHOOL OF LAW

THIRD YEAR

Anderson, Thomas Alexander,	Hartland,	74 Third St.
Duun, Patrick Henry,	Brewer,	Bass Building.
Higgins, Morris Prescott,	Orrington Center,	66 Wilson St.
Holman, Charles Vey,	New York City,	88 Broadway.
Kenniston, Hartley Garfield,	Phillips,	115 Essex St.
Lord, Harry,	Bangor,	79 Exchange St.
McKay, Malcolm,	Scotsville, N. S.,	250 Hammond [Street.
Mitchell, Adnah Jones,	Augusta,	250 Hammond St.
O'Halloran, James,	Bangor,	251 Union St.
Ritter, George William,	Monson, Mass.,	70 Charles St.
Robinson, William Henry,	Bangor,	74 Jefferson St.
Selkirk, Robert William,	Wilder, Vt.,	265 Main St.
Weatherbee, Albert Washington,	Bangor,	198 Broadway.
Wilson, Frank Palmer,	Belfast,	9 Boynton St.

SECOND YEAR

Fish, Charles Henry, Jr.,	Bangor,	7 Rollins Ct.
Geary, Thomas Reardon,	Whitneyville,	83 Somerset St.
Greeley, Harold Dudley,	Minneapolis, Minn.,	80 Maple [Street.
Merrill, John Bryant,	Bangor,	26 Jefferson St.
Morson, James Herbert,	Marshfield, P. E. I.,	50 Charles [Street.
Mudgett, Ulysses Grant,	Hampden,	Hampden.
Murray, Edward Patrick,	Bangor,	190 York St.
Osgood, Burt Stirling,	Kingman,	65 Summer St.
Putnam, Varney Arthur,	Danforth,	251 Union St.
Reid, Charles Hickson,	Bangor,	60 Lincoln St.
Thombs, George Warren,	Monson,	65 Summer St.
Violette, Nil Louis,	Van Buren,	74 Third St.
Winn, George Hayes,	Lewiston,	293 State St.

FIRST YEAR

Blanchard, Benjamin Willis,	Bangor,	118 Congress St.
Brown, Royal Weaver,	Boyd Lake,	252 Harlow St.
Bryant, Glidden,	Newcastle,	166 Essex St.

Buckley, William Wallace,	Winchendon, Mass.,	65 Summer [Street.
Clarke, Edward Everett,	New Bedford, Mass.,	50 Charles [Street.
Clough, George Edwin,	Monson, Mass.,	50 Charles St.
Fish, Guy Rex,	Bangor,	7 Rollins Ct.
Fish, William James,	Bangor,	7 Rollins Ct.
Frye, William Nicholas,	Dexter,	33 Center St.
Haley, John Howard,	Savage,	235 Center St.
Hight, Clarence Bertram,	Athens,	55 Ohio St.
Lang, Alfred Alexander,	Zicques, P.R.,	265 Hammond St.
Lougee, George F., Jr.,	Hampden,	Hampden.
McLean, Neil Vincent,	Bangor,	33 center St.
Mansur, Walter Granville,	Pittsfield,	33 Center St.
Potter, Paul,	Worcester, Mass.,	74 Third St.
Sipprelle, Judson Emery,	Bangor,	197 Warren St.
Snow, Donald Francis,	Bangor,	134 Ohio St.

SPECIAL STUDENTS

Hadlock, George Russell,	Islesford,	166 Essex St.
Ryan, Matthew L.,	Salem, Mass.	

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